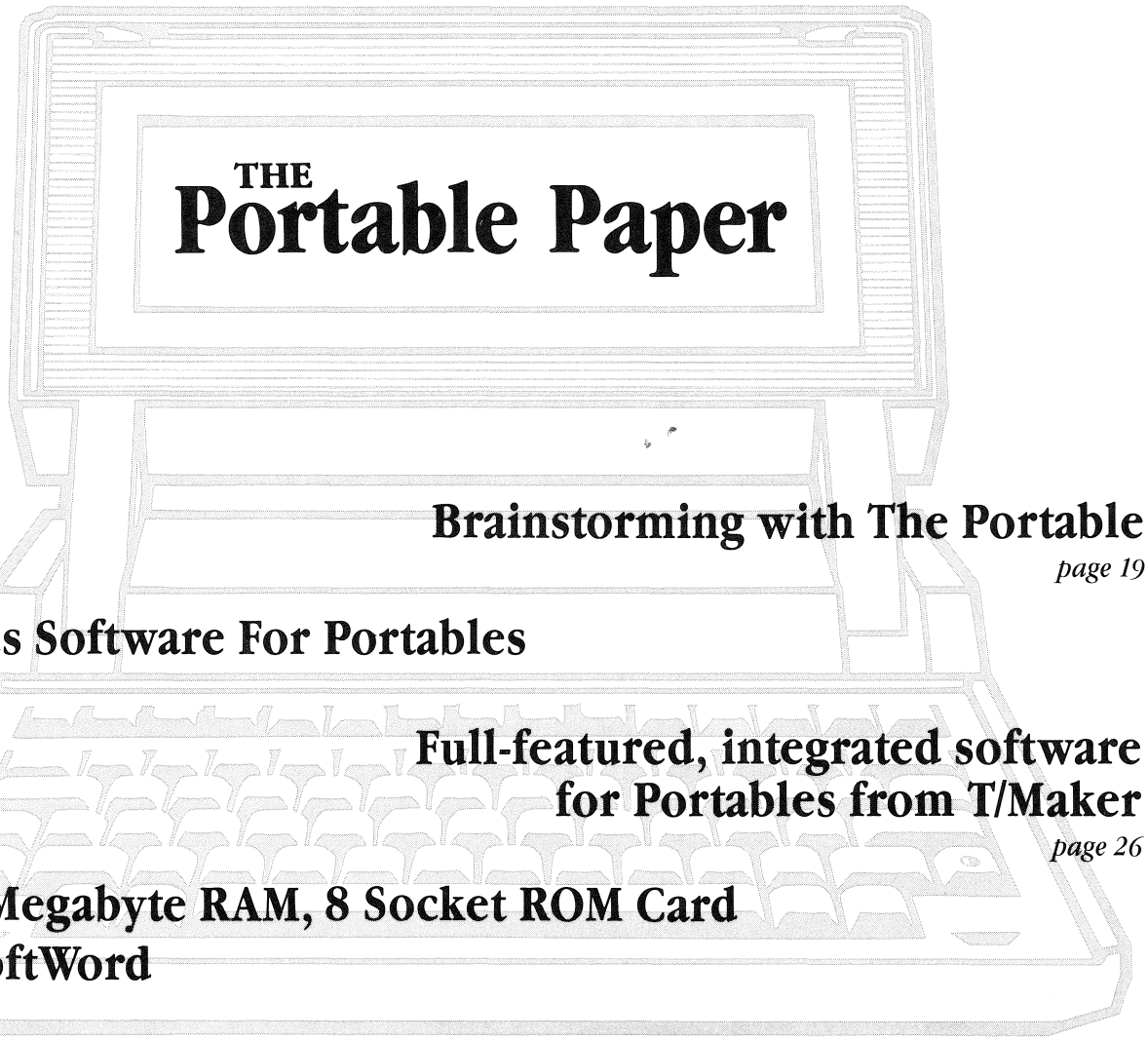

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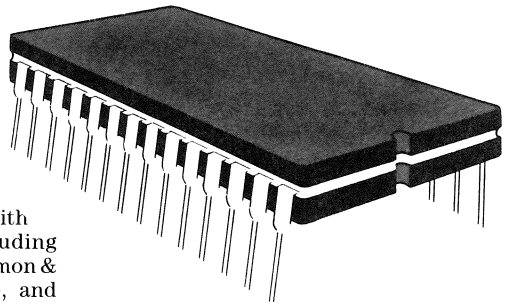
Great news for Portable Plus users:

Our best-selling Portable software now on ROM chips



Pack your favorite programs into just a few slots in your ROM drawer!

- ***Save valuable memory space***
- ***Eliminate need for disk drive***

—Custom ROMs available too!

Now you can simultaneously free up memory space in your Portable Plus and save yourself the trouble of using a disk drive.

How? It's simple: Some of our best-selling software products are now available on ROM Backup—as many as five products per chip. Insert one or more of our ROM Backup chips in your ROM drawer and you'll never have to load those programs again.

It's the ultimate in convenience. It's much faster than running programs off a disk drive. And it leaves your computer's internal memory free for data and other programs.

ROM BACKUP: HOW IT WORKS

Before we could offer software on ROM to our customers, we thoroughly researched the field, locating the most reliable sources of Roms and ROM services. In addition, we have formed special ROM agreements with our leading software suppliers, including Borland International (Turbo Pascal), Simon & Schuster (Webster's Spelling Checker), and Southern Software (SideWinder).

For numerous legal, economic, and logistical reasons, we offer ROMs to you as a Backup Service. This means you may purchase a product on ROM provided you already own the product on disk. (If you purchased a disk product from us—Personalized Software—we have that in our records. If you purchased a product elsewhere, you must show us proof of purchase before we can sell you the ROM Backup.)

Also, it is important that you read and adhere to the licensing agreement that comes with the disk-based version of the software you buy, because the same agreement applies to the corresponding ROM Backup. In most cases, this means you may use the software on only one computer system. Remember, you are buying a *backup* copy of your software, not a second copy.

Having to buy both the disk version and its ROM Backup is not without advantages. For one thing, many disk products include extra utilities that have to be deleted from the ROM chips in order to save space. Also, if your ROM drawer gets full, you can remove a ROM chip and still run the corresponding program off your disk drive.

LIFETIME MONEY-BACK GUARANTEE

Our ROM Back-Up Service comes with a lifetime guarantee: If a ROM proves defective at any time—as long as you own the computer in which it is installed—we will replace it at no charge.

In addition, our regular 60-day guarantee of satisfaction also applies: If, within 60 days, you are dissatisfied with a ROM Backup product for any reason, you may return it for a full refund. However, we don't think you'll be dissatisfied. You'll find these ROMs to be fast, reliable, and an incredible boost to your productivity.

Whatever your reason: to free up valuable memory space. . . to minimize the need for an external disk drive. . . or for sheer convenience, order one or more of our best-selling programs on ROM Backup today.

Complete ordering instructions are inside the back cover. ■

SOFTWARE AVAILABLE ON ROM

Here are the programs we're offering on ROM Backup. (For product details, see individual ads elsewhere in this issue.) Note that in many cases you can save space in your ROM drawer by buying two or more programs on the same chip. All our ROMs come with complete, easy-to-follow installation instructions.

You must own (or order) the disk versions of any products you buy on ROM Backup. To order, use order form inside back cover.

Product	*Notes*	*Size of ROM*	*Prices*
Shelp	Includes improved version of note extraction program.	32K	$55.
SideWinder	Does not include any of the utility programs that come with the disk-based version of SideWinder.	32K	$55
The Editor		64K	$95.
PrinterTalk + Format110		64K	$95.
Shelp + SideWinder	Same versions as on 32K ROM chips (see above).	64K	$95.
Turbo Pascal	Includes RUN.COM, which can save 10K of disk space from any program you compile with Turbo.	64K	$95.
Typing Whiz		64K	$95.
Best of DOS Tools	Contains selected utilities from Portable Utilities Disk, Vol. 1: DOS Tools*	128K	$119.
Super ROM The Editor Shelp SideWinder Mini PrinterTalk Format110	Mini PrinterTalk is the abbreviated version included on the PrinterTalk disk; it is functionally equivalent to PrinterTalk for most applications. Shelp and SideWinder are the same versions as on the 32K ROM chips—see above.	128K	$149.
Webster's Spelling Checker		256K (Two 128K ROMs)	$179.

*Utilities included in the ***Best of DOS Tools*** ROM Backup are as follows. For program details, see Portable Utilities ad in this issue.

PACK	VDL	MOVE	WHEREIS	PRNCONF	TRIM	DIRS
CLEAN	TY	TJETA	CHANGE	SDL	FGREP	SQPC
COPYNEW	ARCE	RENDIR	ASK	MOVEALL	LABEL	FDUMP
DUMP	TMA	OFF	TEE	WAIT	BEEP	and more
DIRALL	CYPHER	FCOPY	ARC520	FDATE		

Note:
ARC520 is shareware; the author normally requests a $35 contribution. However, you do not need to send any money. We've already paid your user fee.

CUSTOM ROMS

You may have some programs or data of your own that you would like to put on ROM—either a single copy for yourself or in quantity for others. (Important: you may not copy off-the-shelf software onto ROM chips without permission of the publisher.)

We are happy to offer our same high-quality ROM Backup Service on a custom basis, at the following prices. Note: Programs can span two or more 64K ROMs.

32K ROM: $123 for first ROM
$32 for each additional ROM*
64K ROM: $135 for first ROM
$54 for each addditional ROM*
128K ROM: Minimum order 100 units.
Please call for prices.

For details, call or write for our free information sheet, *How To Order Custom ROM Backup.*

**Further discounts are available for orders of 10 or more identical ROMs.*

ABOUT ROMS

A ROM ("Read-Only Memory") is a microelectronic chip that stores programs or other data. Once information is "burned in" to a ROM, it cannot be altered.

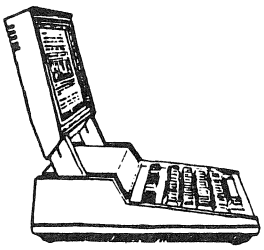
A different form of ROM, called an EPROM, *can* be altered once information is burned in. (EPROM stands for Erasable Programmable Read-Only Memory.)

Although blank ROMs are in general less expensive than blank EPROMs, the initial burn-in costs for ROMs are much higher. ROMs also require a much longer lead time to produce than EPROMs. Currently, EPROMs that can be run on the HP Portables come in 16K, 32K, and 64K sizes. ROMs are 128K.

We use EPROMs for our 32K and 64K backup chips, and ROMs for our 128K packages.

A choice between more memory or ROMs?

Well, now you can have both!



Responding to your requests for even more facilities, we've now integrated 1-Megabyte of user memory plus four pairs of application ROM sockets into the same Portable PLUS drawer.

Memory Drawers
Available in **384K, ½, 1** or **2-Megabytes**, memory is partitioned between Main (max 512K) & Edisc via PAM's System Config menu. 2-Mb drawers are usable only on a PLUS with 512K of inbuilt memory, but other sizes are usable on any PLUS computer.

RAM-Disc Drives
Similar to drive A: Edisc, these provide a **½, 1** or **2-Mb** fast access electronic drive. To set up a drive, copy a special file from the supplied 3½" disc then format, write and read from the drive as normal. All sizes are usable on any PLUS, but RAM-Disc memory cannot be allocated to Main Memory nor drive A: Edisc.

RAM/ROM Drawer
Usable on any PLUS, the **1-Megabyte** of memory is allocated to Edisc or Main via PAM System Config. Switches configure **eight ROM sockets** to accept various HP or custom ROM/EPROM combinations. ROM developers, can even set a cascaded mode to emulate larger ROMs packages by using smaller EPROMs. If you prefer the RAM/ROM drawer's memory as a RAM-Disc Drive, just specify that on your order.

Installation
Each product comes installed in a plug-in drawer, ready to replace a blank drawer from your computer - just undo two screws! **Note:** To expand a PLUS above the maximum total Main/Edisc size of 2½-Mb, you must use a RAM-Disc.

Price List:	£ Sterling
384K Memory Card	£575
½-Megabyte Drawer*	£800
(Upgrade to 1-Megabyte)	£500
1-Megabyte Drawer*	£1200
1-Megabyte RAM/ROM Drawer*	£1200
2-Megabyte Drawer*	£1800

* **When ordering, you must specify either normal Memory or RAM-Disc format.**

Prices, including postage, packing & insurance, are correct at 5.June.87, but subject to change. UK residents must add VAT. Export orders are subject to the granting of an Export Licence.

For detailed specifications, quantity and "Portable Paper" subscriber discounts, contact SoftWord. For US sales contact Personalized Software.

SoftWord will be closed for reorganisation and annual vacation during July. Orders and telephone enquiries will be processed upon our return.

SoftWord, **Astage, Rectory Lane, Windlesham, Surrey, GU20 6BW, England**
Telephone: National Bagshot (0276) 75440
International +44276 75440

In the United States all SoftWord products are available exclusively from Personalized Software, P.O. Box 869, Fairfield, IA 52556, (515) 472-6330.

Prices are as follows:

	Retail Price	*Subscriber Price*
2 Meg RAM Card	$2995	$2695
1 Meg RAM/8 Socket ROM Card	$1995	$1695

To order use order form in back of issue or call (515) 472-6330.

Perfect for the Plus

WordPerfect. It's the best-selling word processor for the IBM PC. According to many reviewers it's the best word processor on the market.

Now there's a version for the Portable Plus—the full-blown Version 4.2, complete with comprehensive thesaurus and 115,000-word spelling checker.

This means that if you already have WordPerfect for your PC, you now can freely transfer text files to and from your Portable Plus. The same WordPerfect features and commands work on both machines. The only difference is the Plus's function key layout, which is simple for most PC users to adjust to.

(As always, you have to plan memory space in the Portable Plus. You'll need 512K of RAM in order to allow space for WordPerfect and still leave room for other files on your electronic disk. To save space, you can optionally remove the thesaurus and/or the spelling checker from RAM, and run them from your HP9114.)

RUNS ON:	
HP Portable	
Portable Plus	●
HP150	
IBM PC / HP Vectra	●

WordPerfect's powerful yet easy-to-use features have made it a best-seller. It's perfect for the Plus... and it just may be perfect for you. Order a copy today and use it at our risk: If, within 60 days, you are dissatisfied for any reason, simply return it for a full refund.

WordPerfect .....$495.
$299 for Portable Paper subscribers

60-DAY MONEY BACK GUARANTEE
See order form for details.

TO ORDER
Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
Personalized Software
P.O. Box 869, Fairfield, IA 52556 515/472-6330

PUBLISHER'S MESSAGE

Hal Goldstein

This issue puts the past and future side by side. On the one hand, we'll see in our Profiles column how an HP110 user makes maximum use of the original HP Portable environment. On the other hand, we'll look some more at 1 and 2 Megabyte RAM cards and the new 1 Megabyte RAM/ROM card for the Portable Plus.

This greater memory capacity makes the Plus a whole new machine. Plus users no longer have to wait for ROM chips in order to run larger applications internally. For example, in this issue we review T/Master, an excellent, full featured, completely integrated package containing a word processor, speller, database, spreadsheet, and communications module. The whole program fits quite nicely on a machine with a 1 Megabyte RAM card. T/Master in 1 or 2 Megabytes of internal Portable Plus RAM space represents an evolutionary step in what an eight-pound machine can do.

I hope Hewlett Packard values what it has created with its ROM- and RAM-based machines—the future of Portable computing. The prototype of it all, the "outdated" HP110, continues to be an incredibly useful machine.

The computer industry press hints that HP may bow to market pressures and soon release a Toshiba-style portable luggable with built-in mechanical floppy and hard disk. At the same time, it is equipping thousands of its sales force and field service engineers with Portable Plus's. Therefore, I hope that HP has the good sense to continue, in parallel, its original Portable strategy of creating truly rugged, portable, self-sufficient, ROM- and RAM-based machines.

My bet is that HP will eventually do it right. In the short term, HP will come out with a Portable "like the rest of them". However, in the long term, HP will be in an excellent position to marry the two current portable technologies.

IBM compatibility; two 5 or 10 Megabyte, independently powered, electronic RAM drives; a faster processor; a better screen and keyboard; all in eight or nine rugged pounds—that is truly the machine for the rest of us.

Hal Goldstein

Letters

Box Cursor In Lotus?

When using the edit function to change the contents of a window in Lotus, I find it difficult to locate the cursor. Is it possible to get the box cursor to work in Lotus?
Jim Keersemaker, Livingston Manor, NY
[Hal—Use the same trick that works in MemoMaker and The Editor to get the block cursor: Press **Extend char f1**. *That will give you the block cursor on the Lotus editing line.*

By the way, we figured out why **CTRL Select** *turns on the block cursor in WordPerfect. When* **Console Mode** *in PAM's* **f6 System Config** *is set to* **ALT**, *according the Portable Plus Technical Reference Manual,* **CTRL Select** *toggles the block cursor.]*

Some Questions And Answers

I have some questions in regard to the Portable Plus:
1. Our Plus is a "D"-Model with 256K of RAM memory. We installed the 128K RAM drawer plus two 128K RAM extension boards, which gives us a total of 640K RAM. How can we have the additional 256K internally installed, and what would the cost be?
[Hal—Call HP Corvallis for an upgrade appointment. The cost to upgrade until July 1, 1987 was $1100, whether you currently have 128K or 256K. When we contacted Corvallis at press time, all they knew was that they would continue upgrading Portable Plus's. The price may change (up or down), but they would not say. If you are able to spend that kind of money for an upgrade, I suggest you look into either HP's 1 Megabyte memory, or our 1 Megabyte RAM/ROM drawer or 2 Megabyte RAM drawer. A further discussion is contained in the column about Personalized Software and page 13 of last issue (Vol 2, Issue 3).]
2. Our Plus has no built-in modem. We know we can buy one from our local HP dealer, but he is not able to install it. Do we have to send our computer to HP? Do you know what the cost is for such an installation?
[Hal—My understanding is that an HP dealer is supposed to be able to install the internal modem and the installation cost is included in the pricing. You might contact HP for another dealer. I think if you call 800-538-8787 they should be able to tell you where you can go.]
3. Somebody told us that a built-in modem draws a lot of power from the internal batteries and shortens the usable time between charges. We heard that an external portable modem, like the new "Midged", etc., not only runs on its own battery, but is also less expensive. How can such a modem be connected to the Plus?
[Hal—I think you are right about the power draw of the internal modem. However, I do not know how significant it is. See our review of the WorldPort 1200 modem (p. 26) and our ad (p. 21) in the most recent issue of The Portable Paper *(Vol. 2, No. 3). We sell the WorldPort Portable modem and cable for $199.95 to subscribers—see order form in back of issue.]*
4. HP sells two ROM-based communication programs. The newer version, Reflection, seems to be pretty complicated to use. Would you therefore recommend the older ROM software communication program?
[Hal—The newer version (Reflection) is just an upgrade of the older version (PC2622). They both require the same learning time. We will publish an article, hopefully next issue, on "Getting Started With Reflection."]
5. Currently we have installed the following ROM-based software: MultiMate, Lotus 1-2-3, and BASIC. We intend to buy: MemoMaker, Reflection (or the older version), and Executive Card Manager. Are there other ROM-based software programs? How much open space do we have left after we install the three additional ROM programs?
[Hal—The HP ROM drawer holds six pairs of ROM sockets. Here is the list of ROM software you mentioned with the number of ROM sockets in parentheses. MultiMate (2), Lotus 1-2-3 1A (2), BASIC (1), MemoMaker/Time Manager (1), Reflection (2), Executive Card Manager (2). You will have two sockets left when you are done. As we advertise on the inside front cover of this issue, we sell several applications on ROM.]
6. We have an IBM compatible (Sperry Corona). We also have software for this

computer on 5¼" disks. We know that there is a plug-in card for IBM PC and compatible computers available to transfer data between a Plus and an IBM or compatible. Your catalog lists a lot of software that runs on both the Plus and on IBMs/compatibles. If we order software from you, can we have both a 3½" and a 5¼" disk?

[Hal—For an extra $7.50 we will include an extra disk on some of our products. However, please be careful to honor the license agreement. Even the most liberal of license agreements will not allow more than one person to be using the same piece of software at the same time. You would need to order an extra copy of the entire package if you had that intention.]

7. We have many Lotus (version 1A) worksheets that contain numerous financial formulas. These worksheet files are stored on 5¼" disks. Can we easily transfer some of these files to the RAM disk of the Plus? If we have some space in the ROM drawer available, we would consider having some of these files converted to EPROMs. What would be the cost for this?

[Hal—You should really see if the HP-IL card (HP82973A) that seems to work in most compatibles will work in your Sperry Corona. If it does, it will be a simple matter of putting it into RAM. The cost of putting your spreadsheet in ROM is $135 per 64K. Write us for details.]

8. Are there aviation programs, like the one for the HP41, available for the Plus?

[Hal- I recently received a review copy of a piece of Navigation software that works on the HP110 and Portable Plus. Its name is "PC Navigator" from Pacific Marine Corporation, 2410 E. 5th St, Long Beach, CA 90814, (213) 433-7815. It retails for $69. (I hope I haven't missed the boat with this answer...)]

9. Are there any other disk drives for the Plus available that are smaller than the original HP version and also run on battery?

[Hal—No. I wish there were less expensive disk drives that ran off AC current.]

10. In our offices we use mainly Macintosh and Macintosh XL computers. Can we transfer files between the Plus and these computers in both directions? Would we need additional hardware?

[Hal—See Vol. 2, No. 2, p. 4.]

Crista Mettner, Winthrop Harbor, IL

Errata

I noticed in the latest *Portable Paper* that you listed me as from Lynchburg, but *The Portable Paper* comes to me at my correct address in Fredericksburg. Also a couple of errors crept into my letter printed on p. 40, Vol. 2, No. 3.

1. ASCII UPLOADING is done with Protocols Off. This was my error.
2. MODEM7 Uploading transfers data at 236 Char/Sec at 9600 baud.

I wonder if you could have an ERRATA section to publish corrections for such errors. It would make it easier to find them.

In answer to Rolf Schmitt's letter on page 40—about transferring files at 19200 baud with a null modem cable:

SmartCom only goes up to 9600 baud, but CrossTalk goes to 19200. I had no trouble connecting at 19200 baud or uploading from the HP110 using XMODEM, but I could not download at higher than 9600 baud. Let me remind you that these high baud rates do not result in significantly higher file transfer rates.

Gary Goodman, Fredericksburg, VA

RAM Versus ROM

Last summer I had a conversation with an HP engineer that opened my eyes to a conception of the ideal Portable Plus different from the one promoted by HP in its literature. What the engineer pointed out was that, with the exception of Lotus 1-2-3 and one or two other packages, the software available for the Plus in ROM has to be copied from ROM into RAM each time it is used. Therefore, having the software in ROM was only a convenience feature, and does not result in a more efficient overall use of memory. He thought that a machine fully configured with RAM—1.28 Megabytes were available at the time -would give much more flexibility to the user.

Now that larger capacity memory drawers have become available, it is time to re-evaluate the ROM software strategy. The advantages of ROM software are nonvolatility, no current memory requirements (although they do require the use of one of the drawers), speed (compared with any mechanical drive), and true portability. The disadvantages are the limited availability of software on ROM (currently being remedied by Personalized Software), cost, and the difficulty and cost of upgrades (MS Word). Large capacity RAM drawers provide a remedy to some of these difficulties.

Perhaps the greatest advantage of RAM is its flexibility. It is possible to quickly reallocate storage space to either documents or other software. The input of other software would require a disk drive or communications, but this is dependency that neither RAM nor ROM can avoid. This flexibility might go a long way toward shortening the time between upgrades becoming available for fully compatibles and becoming available for the Plus. More overall storage capacity is another advantage available with RAM. Another more minor advantage is that RAM is between two and four times faster than ROM.

The primary disadvantage of RAM is its volatility. Most Portable owners have probably lost some work on their Edisc after having to reboot their machine following a system lockup. With an expanded RAM drawer, the potential for loss is increased. Frequent backups will reduce the magnitude of the problem, but access to a drive and disks will be required.

At first glance, it appears that cost is the deciding factor in favor of ROM. However, when one analyzes the cost per byte, this advantage narrows considerably. The lowest cost per byte ROM (128K) is only 23% less expensive than the lowest cost per byte RAM (2024K). And the next lowest cost ROM is 19% higher than that same RAM drawer. I have worked out the cost per byte of all memory alternatives (see chart below).

Comparison Of RAM and ROM Cost Per K-Byte

Type (PS = Personalized Software)	Capacity (Kbytes)	Cost	Cost/Kbyte
PS ROM	128	$119	$0.93
PS 2 Meg RAM Card	2048	$2,695	$1.32
PS ROM	64	$95	$1.48
PS 1 Meg RAM/ROM Card	1024	$1,695	$1.66
HP 1 Meg RAM Card	1024	$1,695	$1.66
PS ROM	32	$55	$1.72
HP RAM Card	128	$250	$1.95
HP RAM (Drawer + 2 Cards)	384	$895	$2.33
HP RAM (Drawer + Card)	256	$645	$2.52
HP RAM Drawer	128	$395	$3.09

What a cost per byte analysis overlooks is the initial outlay required to obtain the memory. Currently it is not possible to acquire RAM in increments without sacrificing both the ability to fully expand to two megabytes and the full-cost advantages. ROMs may be acquired as needed and need not be purchased in quantity to reach the cost per byte level of the largest RAM drawer. However, if one can afford the initial cost of the large RAM drawers, the advantages over the long run could be appreciable.

I believe that either a significant drop in RAM prices or the availability of user expandable memory drawers would shift the balance in favor of RAM. However, cost is not the only factor, and my ideal system would include both RAM and ROM drawers. Perhaps someone will come up with a moderate cost, user expandable memory drawer that holds one megabyte CMOS static RAM chips so I won't have to choose. Until that occurs, no one optimal configuration exists, and each user need only be aware of the options and the increased functionality that greater storage space allows.

Jonathan Feinstein, Ithaca

2 Meg RAM Questions

I have some questions first about SoftWord's 2 Megabyte RAM disk. In the article, Vol. 2, No. 3, p. 13 of *The Portable Paper*, it states that the RAM disk will be used as drive C unless there is an external drive installed, and then the RAM disk becomes the last drive in the loop. Is there a way to make the RAM disk always be drive C (for ease of making useful batch files)? Also, what is the potential for bugs, and how will Softword deal with problems? I know from experience that HP will stand behind its products.

If Webster's Spelling Checker takes 207K, what does the rest of the 256K of ROM space get used for, and where do you put extra user defined words?

Gerald Fuller, Culbertson, MT

[Hal—You will just have to create a batch file for your most common con-

figuration, since the name of drive will change depending on how many devices you have in the loop. However, with that much memory, I would imagine most of the batch files will stay constant—you will know when you will be using an external drive. The other solution is to use the DOS **assign** *command.* **assign a=c** *"fools" the system into thinking the A drive is the C drive. A DOS* **dir a:** *will list the files of the C drive if the DOS command* **assign a=c** *has been given.*

There is a year's warranty on the RAM disks sold through SoftWord. We will stand by any such card we sell. If you can afford to purchase a SoftWord card, we certainly do not want to lose you as a customer.

We may put extra utilities on the empty ROM space in the Webster Spelling Checker, but no promises. User defined words will have to reside in RAM.]

Letter Quality Printer Suggested

In response to your request in the last issue for names of good letter quality daisy wheel printers, I suggest the Brother EM100 (configuration 300 baud, 7 data bits, 1 stop bit, even parity, XON). I have used it for three years and think it's great.
Michael Goergen, Washington, DC

Empowerer—Pro And Con

EMPOWERER—CON
Late last year I ordered the HP9114 Empowerer and battery pack. The equipment has since arrived, and I was disappointed as the presentation and quality was much below the standard I have enjoyed from your organization. This was based on:
1. The shape, size, and general layout of the Empowerer is quite different from the neat "cube" advertised.
2. No attempt has been made to color coordinate the device with the disk drive, ThinkJet, and computer.
3. The poor installation of the new external male plug on the battery pack leaves the outer protection case both split and distorted.
4. The device arrived with an unusable "continental" plug. I am returning the Empowerer and battery pack. I have found the above both frustrating and costly and believe with a little more effort all would have been well.

I do repeat that I am totally enthusiastic and satisfied with *The Portable Paper* and other products purchased through your organization.
C. David Gamble, Dunedin, New Zealand
[Hal—I am sorry for all the difficulty you experienced—I cut some of the gory details from your letter. For the time being we will make only Empowerers for normal U.S. AC current.

By the way, given that we are not hardware manufacturers, I like the look of the Empowerer and thought we did a pretty good job with it. Frankly, if we didn't feel it was such a service to our customers, we would take it off the price list. We have had almost no complaints or problems once we have sent Empowerers out. However, as many of you who have patiently waited for months to get your unit may have surmised, it has been more trouble than it was worth for us. We will keep manufacturing them, and by the time this newsletter comes out, we may even have some in stock.]

EMPOWERER—PRO
Let me tell you that the HP9114 Empowerer is one piece of equipment that anyone with an HP110 can't do without. It surely makes a world of difference in the usefulness of the 110.
John G. Sibley, Westport, CT

Paper Jetline

I hope to see "resident" in *The Portable Paper* an updated list of InkJet paper suppliers. The contribution of the readers would be essential. I will start with a note: When I bought a QuietJet, I received 50 sheets of very high quality, fancy looking inkjet paper. The reorder number was the same as the standard HP inkjet paper which is quite different: much lighter and not so fancy looking. Somebody at HP Corvallis explained to me that the 50 sheets of very high quality inkjet paper were from a a prototype that was subsequently excluded from the market because it was too expensive.

Therefore, HP is supplying only one type of inkjet paper in different cuts. In searching for heavier, better, and possibly cheaper paper, I have found the following suppliers:
1. United Paper, 1-800-526-2364—One type of paper in one single Z-type cut. It is heavier than HP's, and the printouts have a better appearance. It is somehow unpleasant at the touch, leaving a "dusty" feeling. The perforations are better marked in the HP paper, which is important at the moment of stripping off the page from the printer. At United Paper they are very friendly and will send a free sample. They will accept small orders, and the price is surely competitive.
2. Hammermill, 1-814-456-8811—Available only through major computer stores (no direct shipments unless for huge quantities). I have just seen it without using it; it seems somehow intermediate between HP and United Paper.
3. Beckman Astra Systems (Part #669957)—At my hospital, for the several ThinkJets they use inkjet paper from Astra Systems. It is heavy, of good quality, and without the glossy appearance of the other brands. The one I saw is a continuous roll without perforation. I will try to get in touch with a representative to find out availability in different cuts and costs. I'll let you know.
Sergio Biguzzi, New York City

An Inexpensive Way To Repair HP Equipment?

Recently I came to near panic when my HP110 and HP9114A disk drive jammed while saving a file from MS Word. After a contrast-key reset the computer worked fine, but the diagnostics routine still showed a broken loop error on the HP-IL interface. Turning the power switch off and on again (even several times) with the 9114A produced only the power light, not the usual self-diagnostic whir I've come to expect. Satisfied that my problem was with the drive, I concentrated on whatever I could do to solve its hang. Since I had two battery packs, I switched them, flipped the power switch on, and heard the sweet, relieving sound of the disk diagnostic routine.

My questions are: Did the battery pack replacement solve the problem? Has

(continued on page 38)

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110% Making More of Your HP Portable

by Hal Goldstein

Batteries And The Portables

HOW TO CHARGE YOUR BATTERIES

The ThinkJet battery is a dry cell battery, while the HP9114 and HP Portable have lead-acid batteries. To maximize the life of your Portable batteries, you need two different philosophies for charging the two kinds of batteries. Here is what HP says:

HP9114, HP110, Portable Plus:

When possible, keep them charged. Always keep the Portable charged on the high side of 50%. Battery life for the lead-acid cells is proportional to the number of times a full discharge cycle is performed. The battery cannot be overcharged.

HP ThinkJet:

Recharge the battery pack only when it is nearly discharged as indicated by the printer power light. Approximately 11 hours is required to recharge a battery pack fully. The battery pack may be charged in or out of the printer.

For either type of battery, never let them fully discharge. Doing so shortens or completely destroys their life. Both types discharge at the rate of a few percent per day when left standing at room temperature. So if you are not using them, if you don't keep them charging, you risk an early death.

Do not incinerate or mutilate the battery pack—it may release toxic materials or burst under extreme heat.

It is possible to charge any of the batteries in your Portable system from the car (or other) battery. You can purchase the six-ounce Mobile Recharger, which plugs both into your cigarette lighter and into the HP battery, for $29.95 from Personalized Software using the order form in back of this issue.

FUEL GAUGE

The **%** "fuel gauge" indicator for the battery (upper right corner on PAM) is updated by keeping track of actual Portable usage. It counts CPU (Central Processing Unit) and I/O (Input/Output) time and then uses a formula to compute the amount of battery charge remaining. Therefore, the **%** is not an exact measure of the state of your battery.

This simulated approach was taken because, as with all rechargeable batteries, the actual voltage does not indicate the charge level. To resynchronize the **%** remaining with the actual battery charge, you must recharge your unit overnight.

PREVENTING MEMORY LOSS

Can you lose memory? Yes, but you must deliberately ignore several warnings. First, always keep the Portable charged on the high side of 50%. According to HP, the battery cannot be overcharged.

Next, use the Power Save Mode and Display Timeout (**System Config, f6** from PAM). Power Save mode actually stops the CPU clock after one second of waiting for a key to be pressed. If a program is running but is not waiting for keyboard input, the CPU continues to run. (Put the Portable next to a radio and you'll hear the on/off circuit noise.)

Finally, the Portables all have an analog warning indicator (**Low Battery!**) that will show up in the lower left-hand corner of the screen. It will appear at about 20% of charge left. Since this is a voltmeter reading, the fuel gauge may or may not be quite the same. This warning will appear every eight minutes in this condition.

When this happens, you have about three hours left of continuous use, or 30 days of non-use (screen-off, power-save on).

If you continue to ignore the low battery warning, the voltmeter then forces the Portable to turn off and stay off. In this mode, you still have between a week and two months to get it charged before memory is finally lost.

As you can see, you really have to work at losing memory on the Portables.

DEAD UNIT

You hit a key and the screen is dead? Not even the contrast key works? Were you last using the Portable as a terminal either directly or through the modem? You probably left the Portable in the terminal mode. Or you ran HPLink and forgot to exit. Not good.

Have you lost everything? Not yet. You've probably got a few more days before everything is gone. The dead screen is the comatose mode and is the Portable's way of saying FEED ME! Just plug it in and in a few minutes it will spring to life. Exit out of the terminal mode and back to PAM and tell it to turn off (**f8**). Leave it overnight and all will be well again.

Why did terminal mode kill the battery? In other applications such as Lotus or MemoMaker, only the CPU and screen are used. However, in the terminal mode, the RS-232 port or modem are powered on (both take a lot of power) and cannot be turned off by the screen timeout value. So the Portable will indeed turn off the screen (if display timeout is not "off"), but not the serial port. This is by design since a user might walk away for a few minutes while logged onto a system. If the serial port turned off along with the screen, it's not predictable what effect this might have on the remote end, so the serial port stays on until told to turn off.

Exiting terminal mode will turn off the serial port.

TEMPERATURE LIMITS

Both Portables have a limit for operation of 32 to 122 degrees F (0 to 50 degrees C). Operation beyond these limits is not recommended since both the battery and the display will be affected. At colder temperatures the display is much slower to change states while warm temperatures will cause the display to darken. Note that keeping the Portables in a car during the winter or summer months

may cause serious problems since temperatures can easily exceed these limits in many locales.

HP9114 DISK DRIVE BATTERY

Both Tom Page of Houston and Kenney Whitright of Dallas advised me of the following. If you have a dead battery pack, and you don't mind a little unscrewing, you can save yourself around $40. Rather than getting a the entire replacement battery pack from HP for $55, you can purchase the battery itself for $16.25. You need a T9 Torx Tool to remove the cover; spade terminals connect the battery.

You can pick the Torx screwdriver at your hardware store or order it for $4 with the battery replacement. You can order from EduCalc at 1-800-633-2252 or for faster service (714) 582-2637. The battery replacement is part #LCR-226P, the Torx Tool is #T9.

Dennis Guthals of Los Angeles told us that his HP dealer was still able to upgrade the ROM on his HP9114A for free. If you have an early HP9114 purchased before 1986 and your HP9114 runs out of gas with only 10 to 20 minutes of continuous use, you might take it to an HP authorized service center.

The one problem with the HP9114 is that when the disk drive is in use, it discharges faster than it charges. That means you can run out of juice in the middle of a disk intensive operation. In Vol. 1, No. 2 of *The Portable Paper*, we discuss the problem and in Nos. 3 and 4 we discuss how to build a power supply (HP9114 Empowerer) that connects AC power directly to the HP9114. There is another article on the subject in the HP CompuServe forum. We sell the HP9114 Empowerer for $129 to subscribers (see order form at end of issue).

Q & A On Plus?

Paul Slawson of UCLA called me just as I was completing this column. He told me he sat next to a gentleman on a plane that claimed he got Symantec's Q & A to work on the Portable Plus. Q & A is one of top rated new programs for the IBM PC and compatibles. It is a full featured word processor/database system. You give it English commands and it does a good job of understanding what you want.

I am looking forward to checking it out. However, if any of you test it, please give me a call or drop me a note with your results. (Be sure to try setting the Plus in the **Alt** console mode using PAM's **f6 System Config**.)

Making Full Use Of The Format Command

CAUTION

Formatting disks can be hazardous. When you format a disk, you wipe out all files on your disk.

The **format** command has a number of useful options. However, if you get careless, it is all too easy to wipe out all the files on, say, your electronic disk. I NEVER use the **format** command directly, either on my Portable or on my hard disk PC systems. I always put **format** commands in batch files.

The following are examples of several batch files I use. The meaning of the **format** commands within these batch files will be discussed in more detail in this article.

DOS Command: **formatl**
Batch File Name: **formatl.bat**
Contents of batch file: **format c:/w**
Meaning: Format single-sided disk
Equipment: HP110 with utilities disk **format.com** program or Portable Plus, HP9114 disk drive

DOS Command: **format2**
Batch File Name: **format2.bat**
Contents of batch file: **hpilfor c:**
Meaning: Format double-sided disk
Equipment: IBM PC compatible, HP-IL card, HP9114 disk drive

DOS Command: **formatc**
Batch File Name: **formatc.bat**
Contents of batch file: **format c:/c**
Meaning: Clear all files from disk in C drive
Equipment: HP110 or Portable Plus, HP9114 disk drive

CLEANING UP DISKS

Rich Burmeister, who just joined us, showed us a most useful trick for clearing the files off a disk.

Suppose you want to clear all the files from an external disk in order to put some new files on it. One way to do this is **del *.***. However, if you have any subdirectories on the disk, they will NOT be deleted. For example, if you have one subdirectory named **subdir**, you need to change directories with **cd \subdir**, then **del *.***, then go back to the root directory with **cd **, then remove the subdirectory with **rd \subdir**. And it gets even worse if the subdirectories have subdirectories or if you have a multitude of subdirectories!

Formatting the disk easily removes all files and subdirectories, but takes a long time to do on an external disk drive and wears down the HP9114 battery. However, the HP version of DOS that is built into both the HP110 and Portable Plus has a format option designed to clear all files without actually reformatting the disk.

First enter DOS from PAM. Then to clear files from the C drive type:

format c:/c

where **c:** is the drive to clear, and **c** is the option. The **c** option clears the disk of all files and subdirectories without formatting the disk. And it is very quick.

To clear a disk on an external HP9114 from an IBM PC compatible with an HP-IL card, use this syntax instead:

hpilfor d:/c

The **hpilfor.com** program is included on the floppy disk that comes with the HP-IL card.

If you want to delete the files from your A drive only, just type **format**; the process takes seconds.

GETTING PREPARED FOR DISK FORMATTING TRICKS

Portable Plus owners: all you need is built into your unit, and you can go onto the next section. HP110 owners: insert your utilities disk into drive C. From PAM or from the DOS **A>** prompt, type **copy c:format.com a:** and press **Return**. This copies the formatting program onto A. The format program built into the HP110 is sufficient for many purposes but incomplete.

CREATING A SINGLE-SIDED DISK

The original HP 3½" disk drives were single-sided and ran off the HP150. Consequently, if you have access to an

(continued on page 40)

Erased your files? Get them back with The Norton Utilities!

Version 4.0 and Advanced Edition

"THE NORTON UTILITIES are among the most helpful utilities I've run across. I use them myself every day, and in my opinion, they're a must. Here's why."

By Hal Goldstein, Publisher
The Portable Paper

It happens to the best of us. One slip of a finger and a whole week's worth of text or data is past history. *But not if you have THE NORTON UTILITIES*!

Just type **qu** (for quick unerase), give the first letter of the name of the file you erased, and *the file gets restored.* Miraculous as it sounds, in many cases that's all there is to it!

How can a deleted file get unerased?

Simple. The file isn't really deleted in the first place. When you delete a file, all that actually gets erased is part of the file's directory entry. (That's why it only takes an instant to delete an entire file.) Without a directory entry, DOS can't find the file, but THE NORTON UTILITIES can.

Now, what about those cases where you can't possibly recover a file because you've already partially overwritten it with other files? Surely THE NORTON UTILITIES can't help you then?

Wrong—they can! THE NORTON UTILITIES won't recover the entire file, of course, but they *can* help you restore the portions of the file that still remain on the disk.

It's done with a powerful utility called **nu** that lets you display, change, and capture to a file any information on any disk. In complex cases you may need to do some detective work, but **nu** will help you find whatever remains on the disk, thereby saving you from countless hours of retyping lost data.

In my opinion, *the ability to recover lost files alone makes THE NORTON UTILITIES well worth the price.* But there's even more to the pachage: THE NORTON UTILITIES are also an excellent *disk management system*. Here are some examples of what you can do:

RUNS ON:	
HP Portable	●
Portable Plus	●
HP150	●
IBM PC / HP Vectra	●

Let's say you want to sort directories and files physically on disk—either by name, extension, size, date, time, or by any combination of these. Just use the **ds** (disk sort) command. I use this one to sort my electronic disk files by size all the time. Then when I display the directory, the larger files come at the end of the list, and I can see at a glance which ones to move elsewhere to free up any needed amount of disk space.

Or let's say you remember putting the phrase "a penny saved is a penny earned" into a text file on your electronic, floppy, or hard disk but you can't remember which file it was—or even which directory. How to find it? *No problem.* Just type **ts** (for text search), specify the phrase, and the program will display every occurrence of the phrase, identifying each occurrence by directory and file.

Or let's say you can't remember which subdirectory you put a given file into. Instead of hunting for the file manually, just type **ff** (find file) and specify the name of the file and the directories to search through. The program does the rest.

Other useful features include the **fa** command, which lets you change file attributes (for example, to make erasable files unerasable or vice-versa), and the **fs** command, which tells you the total file size of a group of files (I often use it to find out the total disk space occupied by my Lotus worksheet ".WKS" files or by all my text files from a given project).

"Indispensible."
PC Magazine

"Don't compute without it."
The New York Times

"You'll bless this disk."
Peter McWilliams
(The Personal Computer Book)

Personalized Software is authorized to distribute THE NORTON UTILITIES on 3½″ disk customized for users of the HP110 Portable, Portable Plus, and HP150.

Because of their great helpfulness and ease of use, THE NORTON UTILITIES are already a best-seller in the IBM PC market. Personalized Software is authorized to distribute them on 3 1/2″ disk for users of the HP110 Portable, Portable Plus, and HP150. (All it takes is a few keystrokes to customize THE NORTON UTILITIES to your machine; just follow the simple customization instructions included on the disk.) Also included in our package are the standard 5 1/4″ disks sold by Peter Norton for IBM PCs.

We recommend the Advanced Edition of THE NORTON UTILITIES for anyone with a hard disk, or for users who want to retrieve blocks of text from disks that have become "corrupted" (unreadable by DOS).

THE NORTON UTILITIES are a time-saver for you and a life-saver for your data. Use them just once and you'll wonder how you ever did without them. Order your copy at no risk today.

THE NORTON UTILITIES
DATA RECOVERY
DISK MANAGEMENT

THE NORTON UTILITIES 4.0 . . . . . $99.95
$89.95 for Portable Paper subscribers

THE NORTON UTILITIES
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(includes version 4.0) $150
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Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
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P.O. Box 869, Fairfield, IA 52556 515/472-6330

NEWS FROM Personalized Software

Products that make HP Portables smarter

P.O. Box 869, Fairfield, Iowa 52556 515 472-6330

By Hal Goldstein

Introduction

Perhaps the most exciting way *The Portable Paper* and its publishers, Personalized Software, have evolved is to become the marketing and distribution channel for non-HP products for the HP Portables. Without *The Portable Paper*, few of the products on our order form in the back of the issue would exist or be known to the vast majority of Portable users.

Each issue we add more and more of our product discoveries onto our product list. With so many offerings, we (Personalized Software) need one central place within *The Portable Paper* to talk about ourselves. Such a section is in line with the purpose of *The Portable Paper*—to help you get the most out of your Portable. We will use your comments and questions to discuss new Personalized Software products, upgrades, bugs, tips and tricks, and back orders.

We look forward to your feedback on this new regular feature of *The Portable Paper*.

Personalized Software: Our Staff Grows

We recently hired our first technical employees besides myself: Rich and Frances Burmeister. Rich and I were both in the Masters in Computer Science program at the University of Illinois in the early 1980s. Rich went to work for Texas Instruments and I went to Hewlett Packard. His wife Frances has gobs of M.I.S. (Management Information Systems) experience. They both moved from Dallas to join Personalized Software and be part of the Transcendental Meditation Program world peace project here in Fairfield, Iowa, of which I am also a part.

The Burmeisters join Fran Kempton and Glen Frank. Fran and Glen have put order into our office. They are responsible for taking your orders and shipping your products.

Rich will be in charge of the development, support, and maintenance of our products. He will help us continue and improve upon our high standards for products we ship. Much of what you will read below about tips and upgrades is due to Rich's initial efforts.

Frances now spends half her time filling orders manually in order to really understand our needs. She is responsible for automating our whole order processing system into a network.

I would like to tie in PC compatibles, a Laser printer, backup systems, along with HP110s/Portable Plus's with peripherals into this network. If any of you have such a setup, please give Frances a call or drop us a note. Assuming that we can tie HP Portables into such a network, we will publish our results for your information.

The Burmeisters will also help me with two other projects I have had in mind for a long time. I originally planned to publish *The Portable Paper* from my HP LaserJet. However, my wonderful graphic designer, George Foster, and typesetter, Ron Flora, keep talking me out of it. They argue that the look of a typeset publication at the resolution of 2800 dots per inch is far superior to the 300 dots per inch that the LaserJet affords. Furthermore, this higher resolution means that the current *Portable Paper* page can comfortably hold many more words than can a LaserJet page.

However, typesetting means we have less control over the output. Mistakes creep in. We have to proof each article at least three extra times after the "final proof." It is hard to make last minute changes. Batch files, commands, and Lotus macros do not lend themselves to typeset, proportionally spaced characters. Besides, it is expensive. I think it inevitable that we go desktop, probably starting with our 1988 issues. Who knows, maybe we will be able to put out more *Portable Papers* a year. We certainly have enough material to do so.

I'd love to hear your thoughts about us publishing *The Portable Paper* using a PC and a LaserJet.

The other major project requested by many of you is to set up a computer bulletin board here with several phone lines. That way you can talk with us and each other, answer each others' questions, submit articles, upload and download files, and get the latest information on our products. I am open to suggestions as to how we can set up such a service so that it is economical for you and profitable—or at least not a financial pinch—for us.

New 1 Megabyte RAM/ROM Card, U.S. Pricing on 2 Megabyte Card

INTRODUCTION TO RAM/ROM

Personalized Software will distribute England's SoftWord memory cards in the U.S. and outside of Europe. The higher memory capacity of the HP 1 Megabyte Memory Drawer (HP82922A), the SoftWord 1 Megabyte RAM/ROM card, and the SoftWord 2 Megabyte RAM card changes the nature of the Portable Plus. The Plus now becomes capable of running larger software applications and manipulating bigger data files internally without the aid of an external disk drive. In order to understand the new offerings, you must understand the nature of the Plus. HP designed tremendous flexibility into the Plus by creating space for two separate memory "drawers". On the bottom of the Portable Plus, there is space to install these two drawers. (The HP110 has no such space.)

Currently, most Plus owners fill this space with one drawer that holds software in ROM such as Lotus 1-2-3, and one drawer that holds RAM (memory). In the HP110 and Portable Plus, memory or RAM can be arbitrarily divided between electronic disk and internal memory using PAM's **f6 System Config**. For example, the memory of a Portable Plus containing 512K of RAM can be partitioned into 200K for internal memory and 312K for electronic disk.

Beyond MemoMaker

You won't believe all the word-processing features this $99.95* program contains—and it takes up less than 40K of memory!

***(only $79.95 for Portable Paper subscribers)**

by Hal Goldstein

Let's face it: MemoMaker is an adequate word-processor, but it has its limits. No search and replace. No simple way to merge files. No destructive backspace key. (To delete the last character, you have to use the left arrow key and the deletion key[s].) No compressed or expanded printing. No. . .—but why go on? If you use MemoMaker, you probably have your own list of things you wish it could do.

Well we have good news! Now there's an easy-to-use text editor that runs on the Portable and Portable Plus that will satisfy almost every item on your wish list. And the program comes with a built-in bonus: It also runs on the HP 150, IBM PC, and HP Vectra, which means that **now you can use the same program and files on your desktop that you use on your Portable.**

The program is called THE EDITOR. It does everything MemoMaker does plus a heck of a lot more. And you don't have to go to the expense of buying WordStar (for the Portable) or MS Word (for the Plus) to go beyond MemoMaker's capabilities.

THE EDITORS's most valuable features are listed on the chart to the right. It's quite a list, isn't it? To me, THE EDITOR is a real blessing. I use it daily instead of MemoMaker, and I've silently given thanks to its author, Ed Gilbert, many, many times. Just a few minutes with THE EDITOR (that's all it takes to be up and running) and I think you'll be a fan of his too.

In addition to the many great features listed to the right, there are five more I especially want to emphasize:

1. THE EDITOR's Lotus-like menus make it incredibly easy to use.

2. THE EDITOR creates ASCII files, which means you can send your files to and from almost any other program or computer without special formats or codes.

3. THE EDITOR will automatically back up your files to protect you against mistakes: When you save a file, THE EDITOR saves not just the current version, but the previous one as well.

4. THE EDITOR takes up less than 40K of memory.

5. THE EDITOR loads and saves files and executes commands exceptionally fast.

RUNS ON:	
HP Portable	●
Portable Plus	●
HP150	●
IBM PC / HP Vectra	●

Even in the desktop market, **it is difficult to find a word processor with this many useful features at this low a price.** For the Portables, THE EDITOR simply can't be beat. See for yourself: Order your copy, risk-free, today.

THE EDITOR $99.95
$79.95 for Portable Paper subscribers.

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Special combined offer—
SAVE $30:
THE EDITOR and THE FORMATTER together—
Only $99.95 total (Portable Paper subscribers only

Beyond MemoMaker—Part II

THE FORMATTER gives you advanced formatting capabilities that even THE EDITOR can't handle—like: multi-line headers and footers•automatic hyphenation (you can even add your own words to the built-in dictionary)•user-specified page length and line length•automatic page numbering•tables and charts•table of contents generation•and more.

THE FORMATTER works by imbedding special formatting codes into your EDITOR, MemoMaker, or other ASCII text files. You can customize THE FORMATTER for almost any printer .

Note: The user manual itself is a challenge, and no technical support is available. We therefore recommend THE FORMATTER for strong computer users or those already familiar with text formatters.

If you need any of the features listed above, and if you're willing to spend the time it takes to learn the commands, THE FORMATTER is for you. Order your copy, risk-free, today.

THE FORMATTER $59.95
$49.95 for Portable Paper subscribers

THE EDITOR gives you all these great text-editing features and more:

- **Search and replace.**
  Just tell THE EDITOR what word or phrase to look for, and it will find every place you've used it. At your option, it will display each occurrence, or replace the occurrences either selectively or globally.
- **Edit two files at once.**
  THE EDITOR will display two separate portions of text at the same time, one above the other. You can view and edit two parts of the same file—or even two different files—simultaneously.
- **Backspace delete.**
  You can erase the last character with a single keystroke.
- **No limit on file size.**
  If you're an HP110 Portable user, you're no longer confined by MemoMaker's 819-Line limit. You can have as large a file as internal memory allows.
- **File merge.**
  You can merge two or more files together with ease.
- Compressed and **expanded.**
  You're no longer restricted to bold and underline. You can imbed control characters in your text to tell your printer to print all or part of your text compressed, expanded, bold, underlined, or whatever else your printer can handle.
- **Unlimited line length.**
  Your files are no longer limited to 80 characters per line. This means, for example, you can print 132-character lines on your ThinkJet printer in compressed mode.
- **Lines per page.**
  You can specify the number of lines per page, using the control codes required by your printer.
- **Easy in, easy out.**
  You can exit from THE EDITOR, run another program, then type a one-word command and be back in THE EDITOR in a flash, exactly where you left off. This includes exiting and returning from DOS—which means you can delete, copy, and rename files while running THE EDITOR.
- **Right justification and automatic paragraph indent.**
  A simple command right-justifies your text, and at the same time automatically indents your paragraphs however many spaces you wish.
- **Undelete.**
  Erased something you want back? No problem. A simple command will undelete the last word, line, or block of text deleted.
- **Upper/lower case conversion.**
  Another simple command lets you change upper case to lower case and vice-versa without having to retype anything.

In terms of useful features per dollar, and in terms of the convenience and increased productivity you gain, I feel that THE EDITOR is a truly exceptional buy. I urge you to try it. Order yours today.

Hal Goldstein

Until now, Portable Plus buyers normally purchased one HP ROM drawer and one HP RAM drawer. The ROM drawer contains 12 empty sockets for ROM-based software. Each socket can contain a maximum of 128K of ROM software. So, for example, the new version 2.01 of Lotus 1-2-3 will take 3 sockets. Five programs offered by Personalized Software sold as "SuperROM" will occupy one socket.

The original HP RAM drawer contains 128K of RAM. Versions of the Portable Plus come with 128K, 256K, or 512K already built in. Therefore, a 512K Portable Plus with an HP RAM drawer becomes a 640K machine. The HP RAM drawer has room for two additional 128K cards. A completely filled HP RAM drawer holds 384K of RAM (128K + 2 x 128K). Until recently, a fully loaded Portable Plus consisted of 896K of RAM (512K + 384K) and as many software applications as would fit in the ROM drawer's 12 sockets.

What follows is a discussion of new Plus configurations. In an attempt to minimize the confusion, all of SoftWord's products will be refered to as "Cards". Both the SoftWord 2 Megabyte RAM Card and the new 1 Megabyte, 8 socket, RAM/ROM Card consist of a "drawer" and memory. The HP 1 Megabyte Drawer also consist of a drawer and memory.

RAM/ROM CARD: 1024K RAM, 8 SLOTS OF ROM

Last issue we announced the new Megabyte memory drawers available from England's SoftWord for the HP Portable Plus. SoftWord has also announced a new 1 Megabyte RAM/ROM card available in August.

This new RAM/ROM card comes with 1024K Bytes of RAM and four pairs of ROM sockets, i.e., space for eight ROM chips. (As mentioned in the introduction above, the current HP drawer has six pairs of ROM sockets, i.e., space for 12 ROM chips.)

What this means is that you can purchase the 1 Megabyte RAM/eight-socket ROM card to replace your existing 12-socket ROM drawer. This gives a 512K Portable Plus 1.5 Megabytes of RAM. In addition, you could, for example, fill the eight sockets in the ROM part of the RAM/ROM card with Lotus (two sockets), Reflection (two sockets), Webster's Spelling Checker (two sockets), MemoMaker/Time Manager (one socket), and SuperROM (one socket). (SuperROM from Personalized Software includes The Editor, SideWinder, Shelp, Mini-PrinterTalk, and Format110.)

If you already have a 384K HP RAM drawer, you might want to take out your ROM drawer and insert the new RAM/ROM card. Then your 512K Portable Plus would have a total of 1920K of RAM (512K + 384K + 1024K) and eight sockets for ROM chips.

This card retails in the U.S. for under $1995. Portable Paper subscribers can purchase it from Personalized Software, (515) 472-6330, for $1695, the same price as a Hewlett Packard 1 Megabyte drawer (HP82922A).

When you purchase your RAM/ROM drawer, you can trade in either your RAM or ROM drawer. See immediately below for details.

TWO MEGABYTE CARDS FOR AS LOW AS $2495

Personalized Software will sell the SoftWord 2 Megabyte cards in the United States for $2995. (See order form at the end of the issue.) *Portable Paper* subscribers receive a 10% discount and pay $2695.

You need 512K of built-in Portable Plus memory to be able to use the 2 Megabyte card.

With a 2 Megabyte card, your Plus has 2.5 Meg of RAM memory. If, in addition, you purchase the 1 Meg RAM/ROM card, your Plus will have 3.5 Meg of RAM and eight sockets to fill with ROM software.

Furthermore, since we now sell used HP Portable equipment, we'll let you trade in your current RAM or ROM drawer and memory: When you buy a RAM card from us, we'll purchase your ROM drawer or 128K RAM drawer for $100 and $50 for each additional 128K of memory. Therefore, by trading in 384K worth of memory, as a *Portable Paper* subscriber the cost for 2 Meg worth of memory will be $2495.

A DRIVE VERSES C DRIVE

As we discussed last issue, all of SoftWord's memory cards come in two forms: A drive Memory Cards and C drive Memory Cards. When you order your memory cards, you must specify which you prefer. In most cases I would recommend the C drive Memory Card for the following reasons.

The C drive option gives you storage space in two internal disk drives, A and C; normally you have storage space in the A drive only. The A drive memory can be configured, using PAM's **f6, System Config**, as usual—dividing available memory between system memory and electronic disk. The size of the C drive memory is fixed (either 2 Meg or 1 Meg, depending on which SoftWord card you buy). If your A drive gets corrupted, you have not lost any files on your C drive. Thus, you have a built-in safety feature if you keep your most important files on both drives.

One other point in favor of the C drive option: If you purchase a 2 Megabyte card for your A drive, you are restricted to at most 2 Megabytes for your electronic disk, which means all your 512K of built-in Portable Plus memory (required for the 2 Megabyte card) must be devoted to internal memory.

Please note that these RAM cards will not have the battery that was mentioned last issue. If the system is reset using the button on the Portable's battery, all information on both disk drives will be lost. Therefore, you will want to regularly back up your A drive and C drive.

In my opinion, the ideal configuration would be a RAM/ROM card in A and a 2 Megabyte RAM Disk Card in C. That would give you 3.5 Meg of RAM and eight ROM sockets. Substituting the RAM/ROM card for the HP ROM drawer means you lose four ROM sockets (512K maximum) in order to pick up an extra 1024K of RAM. As Jonathan Feinstein of Ithaca, NY, pointed out to me, the cost of a byte of RAM is much cheaper than the cost of a byte of ROM.

HOW RELIABLE ARE THE CARDS?

In talking with many of you, a major concern is the reliability of the SoftWord cards. No one can know with absolute certainty how reliable a new product produced by any manufacturer will be. However, there is a year warranty on all parts and labor. We'll work directly with any customer who orders the RAM card through us. If there is a problem, we will have the memory repaired or replaced

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as soon as possible. If you buy the C drive RAM Disk Card, you will still have a functional Plus while your Memory is being repaired.

David Burch of SoftWord told me that they have sold 380 1 Megabyte RAM cards in Europe; only one had any problems, and it was promptly repaired. Based on SoftWord's track record, we feel good about distributing its memory units.

Some of you have also asked if the extra memory means either a slow down in RAM disk access or a greater drain on the Portable Plus battery. Again, according to David Burch of SoftWord, they designed the cards with these factors in mind. According to SoftWord's benchmark testing, the cards are just as fast or faster than HP memory, and they do not drain the battery faster than HP drawers.

If you have any questions, contact us, Personalized Software at PO Box 869, Fairfield, IA 52556, (515) 472-6330, or David Burch, SoftWord, Astage, Rectory Lane, Windlesham, Surrey, GU20 6BW, England, (011) 44276 75440.

INSTALLATION

David Burch of SoftWord assured me that it is easy to install these cards. He sent me a copy of his clear, well-written manual that contains installation instructions. You will need a torque screwdriver, which you can purchase at a local hardware or discount store.

If you do not want to do it yourself, I have two suggestions. You could take it to your local computer store (preferably an HP dealer) and pay for somebody's time. Alternatively, you could send your Plus here, and we'll do it for $95 and send it back overnight. Call for an appointment.

SoftWord To Distribute Personalized Software Products In Europe

SoftWord, makers of the 1 Megabyte RAM/ROM Drawer and 2 Megabyte RAM drawer, will, beginning August 1, distribute all Personalized Software products for us in Europe. This should cut down on many of the problems shipping our products overseas such as unreasonable tariffs, high shipping charges, time delays, communication problems, and so forth. All details will be published in the next issue of *The Portable Paper*. In the meantime, beginning August 1, you could contact SoftWord at Astage, Rectory Lane, Windlesham, Surrey, GU20 6BW, England, 44276 75440.

Get Your Portable Equipment From The Portable Equipment Exchange

We at Personalized Software are constantly hearing of people who want to buy or sell HP Portable equipment. We decided to open a new division of Personalized Software to handle this need. If you have HP110 or Portable Plus equipment to buy or sell, give us a call. We already have a number of HP110 systems for sale and a few Plus's.

If you want a new Plus, you can work through us. We will be working with an HP dealer to fill your needs. To bring down the cost, we can use memory or ROM drawers that other customers have traded in when they purchased the RAM/ROM card or 2 Megabyte RAM card from us. We can certainly bundle in a RAM/ROM card or a 2 Megabyte card with your purchase.

If none of this drawer/card business makes any sense, we'll configure a system to meet your needs.

Again, if you have Portable equipment to sell for cash or trade, give us a call.

The Latest News on ROM Backups

If everything goes as expected, we should be shipping the 32K and 64K ROMs about the time you receive this issue. As mentioned in our advertisements, we will not be shipping the 128K ROMS until August or early September. However, your commitment in ordering these ROMs—we'll bill you or charge your credit card upon shipment—will be most helpful.

Here is our situation. Normally, we must order a minimum of 500 128K ROMs made for each product. In the case of Webster's, which takes two 128K ROMs, we have to have 1000 total ROMs made. (There is no such limit with 64K or 32K ROMs, which are actually EPROMs or PROMs.) Therefore, if you feel you are going to order 128K ROMs, it will help us if you tell us so ahead of time.

We are waiting a bit longer before burning the DOS Tools ROM. I am still open to your feedback as to its contents. (Call as soon as you read this if you have strong feelings.) In particular, we are thinking of substituting **diskpack** for **arc520**. From talking with several of you, it seems that squeeze (**sqpc.com**), unsqueeze (**ty**), and de-arc (**arce.com**) are the ones needed for condensing and uncondensing files. We will also include line feed **lf** and form feed **ff**, which let you adjust ThinkJet paper from your Portable.

Another possibility for storing large data or program files should be available in August in the form of 128K PROMs. If 128K PROMs do become available soon at less-than-outlandish prices, we would not be forced to order 500 chips to produce 128K ROMs.

Here are some of the other programs that you have written or called to say that you would like on ROM: WordPerfect, The Norton Utilities, RightWriter, Sketch, HP Calculator (from the 1987 Subscriber's Disk), Private File, and Milestone.

We have contacted WordPerfect about the possibility of putting everything but the Thesaurus on four ROM chips. HP and WordPerfect discussed the possibility at length but nothing came of it. Maybe with our approach of providing ROMs only as a backup, we can work something out with them. (Write M. Daniel Lunt, VP Marketing, WordPerfect Corporation, 288 West Center St., Orem, UT 84057, to express your interest in having this ROM backup service provided by us.)

The Peter Norton Company originally refused our request of putting some of The Norton Utilities in ROM. However, we have written Brad Kingsbury again to ask for permission. Again, if you want to urge the company on, write Brad and Peter Norton at The Peter Norton Company, 2210 Wilshire Blvd., Suite 186, Santa Monica, CA 90403, requesting that they let us back up their software on ROM.

Many of you really seem to like RightWriter a lot: I've gotten quite a few ROM backup requests. The problem is that the latest RightWriter, version 2.1, has grown awfully big. We would need three 128K ROMs to accomplish ROM backup. If we can put the program on PROM or if enough of you can convince me to order 500 sets of them, we'll do it. (It may cost you between $200 and $300 for a set of three 128K ROMs, so we'll see how committed you are.)

We will definitely put SKETCH on ROM. We are thinking of offering SKETCH alone on a 64K ROM and SKETCH, HPRINT, the Mouse driver, and a screen extraction graphics utility that comes with SKETCH on a 128K ROM.

HP Calculator, without its help file, might barely make it on a 64K ROM. If HP Calculator on ROM interests you, tell me. By the way, the HP Calculator program becomes much more usable and enjoyable when using a mouse.

Finally, we'll look into putting Milestone and Private File on ROM. In the meantime, please keep telling us what you want on ROM.

Two New Products

LOGITECH MOUSE SYSTEM

Bill Saltzstein has completed writing mouse software for the Portable Plus. The serial version of both the LogiTech and Microsoft mice will work with the Portable Plus and Bill's software. Last issue's *The Portable Paper* (Vol. 2, No. 3, p. 29) discussed using the mouse with the Plus. We also mentioned that the LogiTech mouse contains an extra programmable button and costs $100 less then the Microsoft Mouse. See also this issue's review on SKETCH for more discussion of using a mouse. The LogiTech mouse retails for $99.95, the software for $70, and a custom cable for the Portable $35. The subscriber price will be $89.95, $60, and $25 respectively, or $174.95 for the mouse system.

HPRINT

I haven't had a chance to play with Paul Grimmer's newest jewel, HPrint. Paul Grimmer through his company Southern Software has written SideWinder for sideways printing to the ThinkJet, Link for data transfer and control between all HP-IL devices, and SKETCH for free form drawing. (Ironically, Paul just moved to Alaska. He'll retain the name of his company, I guess since he is still South of the North Pole.) All of his products, including HPrint, may be purchased from Personalized Software using the order form in back of the issue.

By the way, support using any of Paul's products can now be obtained from *Southern Software, 215 Hawthorne, Houston, TX 77006, (713) 522-6220.*

What follows is a summary of HPrint's features based on the introduction of a draft of the HPrint manual.

HPrint is a text file printing program that gives you a broad range of control over your HP printer. With HPrint you can: insert HPrint codes in your MemoMaker, Editor, or ASCII file; print the file; and get your HP printer to do most anything.

For example, you can easily design your own special character or character set using an HPrint utility. Suppose you need a Greek alpha and a Calculus integral sign. In the HPrint utility you could create the alpha and integral sign and assign it, say, to characters **#** and **%**. If you tell HPrint to do so, when HPrint comes to a **#** and **%** in your text, it will print an alpha and integral sign on your ThinkJet.

Paul includes an entire italic character set with HPrint that you can easily use with your ThinkJet or QuietJet printer.

HPrint can produce headers, footers, subscripts, superscripts, page numbers, and time and date stamps. You can easily change type styles in the middle of your document from, for example, bold italic to normal condensed print.

Paul has implemented mail merge. For example, with HPrint you could create multiple copies of a form letter and customize each copy by merging the letter with a list of addresses from another file.

HPrint also has a provision that will stop the printer at any specified point in the document. Once the printer stops, you can change the color of the ThinkJet cartridge. This allows you to produce multi-colored documents.

Finally, Paul integrates HPrint with another of his

products, SKETCH. You can use HPrint to easily merge SKETCH graphics with a normal text file. So, for example, you could use SKETCH to create an illustration of an idea that you were presenting and use HPrint to merge the drawing with text.

If all this sounds a bit familiar, then you have been reading our PrinterTalk ads or own PrinterTalk, Format110, or The Formatter. The purpose of all these programs, along with HPrint, is to print text files created by MemoMaker or The Editor or any other word processor capable of creating ASCII files. These programs all add professional features to your printed output.

I wrote PrinterTalk, Ed Keefe (*The Portable Paper* Looking Glass columnist) wrote Format110, and Ed Gilbert (The Editor's author) wrote The Formatter. If what Paul says about his program is true, I think HPrint may emerge the clear winner. Paul tells the program is finished and the manual will be printed by the time you receive this issue. My only concern is the clarity of the manual. There are many features in the program; I hope Paul does a good job explaining them.

I am going to send copies of PrinterTalk, Format110, The Formatter, and HPrint to David Hughes for an impartial judgment. Hopefully, we will have his review for next issue.

HPrint should be available in July from us. It retails for $80. Portable Paper subscribers pay $75.95. If you own Sketch or order HPrint with SKETCH, the cost becomes $69.95 for HPrint.

Bugs, Upgrades, Fixes, and Product Notes

SHELP NEWS

Several users have reported problems with Shelp. Shelp, available for the Portable Plus only, contains a popup calculator, notepad, keyboard macro generator, and system off facility. So, for example, within Lotus you can pop up your notepad to make notes or turn the system off. It is a most useful product that, even with the problems described below, I would recommend without hesitation.

First, Gerald Fuller and several other readers have reported a significant bug using the OFF function within MemoMaker. Sometimes when you turn MemoMaker off with Shelp in the middle of an editing session, you will lose your current work. The best workaround (and a good idea anyway) is to always save your work in any application before using the Shelp OFF feature.

Secondly, Bernard Sudreau of France reported a major problem. He says: "I put my Portable Plus to sleep with the OFF function of Shelp when in DOS. Then I received an incoming call through the built-in modem. The result was a corrupted disk and the message **Press F1 to reformat**. I do not know if this problem is specific to my 128K Plus recently upgraded to 512K. Please warn your readers." It is, of course, also possible that the corruption had to do with the incoming call or what was already on his disk, but I would not chance it.

We also hear that some of Shelp's features do not work correctly on non-U.S. keyboards. I don't have any more details than that.

Finally, as we indicate in our advertisements, Shelp will not work with graphics screens. Therefore, it does not work with MS Word, SKETCH, FLOW CHARTING II+, or Tiger Fox.

NEW! VERSION 2.1

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RightWriter is a new tool to help you produce lean, powerful BUSINESS WRITING. RightWriter uses advanced artificial intelligence technology to flag errors in GRAMMAR, STYLE, USAGE, and PUNCTUATION. RightWriter is the first office automation package aimed at producing better writing, not more writing.

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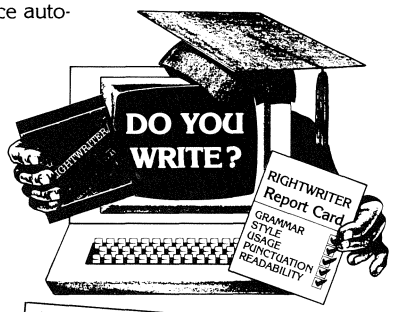
- **Uncommon Word List** — lists misspelled, slang, and uncommon words.
- **Recommends** — never decides. RightWriter is a writing aid. The final decision is always left to you.



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RightWriter is a trademark of DecisionWare, Inc., WordStar is a trademark of MicroPro International Corporation. MultiMate is a trademark of MultiMate International. MS Word is a trademark of Microsoft Corporation. WordPerfect is a trademark of WordPerfect Corporation.

Unfortunately, Randy Salo, the program's author, has not been able to be responsive in fixing the bugs or upgrading the product. There is a chance that we may purchase from Randy the rights to Shelp. That may help the situation and allow us to fix or enhance the product. We'll see.

Even with these problems, I highly recommended Shelp for every Portable Plus user. It is easy to use. Shelp is one of those programs you will use ever day and won't understand how you ever lived without it.

Finally, we have a new improved smaller **extract** utility called **ufnotes**. This utility extracts notes created by the Shelp notepad, allowing you to append the extraction to an existing file. Shelp users may obtain the program for $7.50 (including shipping and handling) or by sending us a formatted disk and a self-addressed stamped envelope.

NORTON UTILITIES VERSION 4 & ADVANCED EDITION

True Story: How the Norton Utilities Advanced Edition saved the T/Master and T/Maker reviews published in this issue from possible extinction.

David Hughes, a regular contributor to *The Portable Paper*, has been working on a series of articles for us. He

called shortly after he put a disk containing these articles in the mail saying that his backup disk was corrupted; he wanted us to send him a copy of his disk when we received it. When we got the disk, it, too, was damaged: we could not read anything on the disk.

I unsuccessfully attempted to read the disk using different disk drives and computers. I kept getting a "Non-DOS disk" error. Then I ran the 4.0 version of The Norton Utilities (**nu.exe**) to look at the disk, but it couldn't read the disk either! Then I remembered that the new Advanced Edition of The Norton Utilities (**nu.exe**) can read disks even with a damaged directory.

When a disk suddenly becomes unreadable, usually the disk directory has been damaged. The directory contains the information about where a file physically resides on a disk. Therefore, if a directory is damaged, it normally becomes impossible to find a file even though the file is fully intact on the disk.

I put my copy of the Advanced Norton Utilities **nu.exe** file into my Leading Edge, and I attached the HP9114 to it using an HP-IL card. I ran the **nu** program with the **/m** option. This option tells **nu** to ignore the directory and just look at the raw material on the disk. Without reading the manual, thanks to the Norton menu system, I figured out how to write the entire contents of the bad disk in the HP9114 to a new 720K file on the Leading Edge hard disk. (I could have accomplished the same end using the Portable Plus putting pieces of the data of the bad disk on to A and then to another drive.) I knew that David's articles had to be somewhere in that 720K file.

Soon after, I got a hold of David. Fortunately, one of his articles reviewed MultiMate. He, therefore, wrote all his articles using the MultiMate documentation system. Each file began with the words "DOCUMENT SUMMARY SCREEN". Also fortunately, David had just formatted the disk he sent me, so each file in theory would be a contiguous block of data. (Unfortunately, David formatted the disk using DOS 3.2 on the HP9114—that seems to have caused the problems in the first place.)

Without having to consult the manual, the process of isolating the files took only a matter of minutes. The **nu** menu system guided me in my search for "DOCUM" in the Leading Edge 720K file. Once found, I could determine quickly what parts of that large file to save in the form of Dave's articles. I was able to do so because Norton showed me the actual contents (in English, not hex) of any physical disk sector (such as one containing "DOCUM").

The next day The Norton Utilities saved me again. I read an important file into my word processor. I then absentmindedly cleared the workspace, created a four-line batch file and saved the new file. Unfortunately, I had not bothered to change the name of the file, so I saved the file under the same name as the original important file.

I used The Norton Utilities once again to search for a phrase located at the beginning of my lost document on "erased disk space". Sure enough, it found the phrase almost instantly, and once again I was in able to resurrect the whole file in a matter of minutes. Apparently, when DOS saved the misnamed batch file, it put it physically at a different location from the file I was able to recover. The **nu** program in all three of the latest Norton Utilities versions—3.1, 4.0, and The Advanced Edition—would have done the trick.

What's New About Norton

For those of you unfamiliar with The Norton Utilities, I strongly suggest you read the Vol. 1, No. 2 *Portable Paper* review of The Norton Utilities or at least our ad on The Norton Utilities in this issue. I believe every HP110, Portable Plus, HP150, and IBM PC compatible user should own them.

Briefly, The Norton Utilities consists of over a dozen file management and data recovery programs. Many of them are so simple to use that you do not need the manual. We originally sold version 3.1. Recently, versions 4.0 and The Advanced Edition became available. The Advanced Edition contains all the functionality of 4.0 along with additional utilities and capabilities.

If you own version 3.1, you'll probably want to upgrade to either 4.0 or The Advanced Edition, but in my opinion it is not an absolute necessity. In some ways the 3.1 utilities are better in the HP Portable environment then the newer versions, since the newer versions, although faster with new options, take up more disk space. This is especially the case for HP110 owners, as we will see below.

Both new versions of Norton (4.0 and The Advanced Edition) come with a new manual, quick reference card, and two 5 1/4" disks. If you purchase The Norton Utilities from us, you will also receive two additional single-sided HP formatted disks containing The Norton Utilities along with instructions for running the various Norton Utilities on the HP110, Portable Plus, and HP150.

The manual itself is clear, well-written, and contains many examples. In addition, with The Advanced Edition you'll receive a second booklet that gives a lucid explanation about everything you could want to know about the way DOS stores information on a disk.

One important difference to HP users between the old 3.1 and the new versions is that many of the utilities in part or whole take over the screen. These utilities include: DS (Data Sort), NCD (Norton Change Directories), LD (List Directories), FI (File Info), TS (Text Search), NI (Norton Integrator), NU (The Norton Utilities).

Plus users need to run these screen mode utilities in Alternative mode (set from PAM's **f6 System Config**). HP150 owners need to run the PC emulator included on our 3½" disk. HP110 users will find the screen options of these utilities awkward at best, and most of the time unusable. However, even HP110 users unable to run some of the utilities in screen mode will gain in overall functionality from the older version to the newer versions. The exception to this for HP110 users is that the new **nu** programs described at the beginning of this article will NOT run on the HP110 (but will run on the Plus and HP150). To rectify this situation we include the 3.1 version of the **nu** (Norton Utilities) program—which runs fine on the HP110—on our supplemental 3½" disk.

The increase in size of some of the programs is significant. For example, my favorite, DS (Data Sort), triples. What follows is a list of some of the additions in the new versions.

1. All programs have help available by typing **?** after the command name. For example, **ds ?** gives the syntax and a brief definition of the different options available in the **ds** command.
2. Four new programs are included:

a. ASK—for making interactive batch files.

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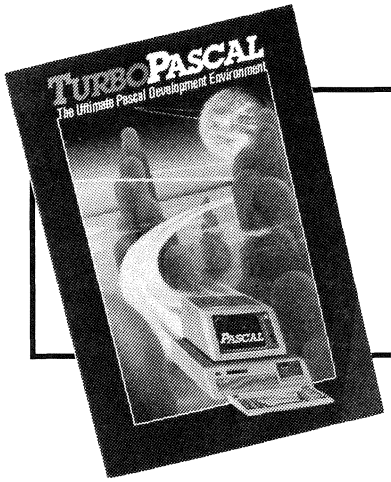
Now available on ROM Backup for the Portable Plus! (See ROM ad in this issue.)



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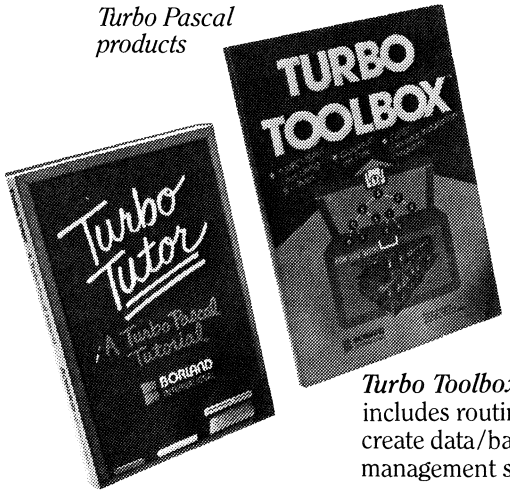

Turbo Toolbox: Disk includes routines that create data/base file-management system.

Turbo Tutor: Disk and manual for learning Turbo Pascal. Includes many features for experienced users.

TURBO PASCAL™	Retail	*Portable Paper* subscribers
Turbo Pascal	$99.95	$89.95
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Pascal programs for Portables	$49.95	$44.95*
Starter Kit	$189.85	$159.95

*$39.95 for Portable Paper subscribers if you purchase any Turbo product from Personalized Software.

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b. File Info—for attaching up to 65-character comments to each file name.
c. Norton Integrator—an on-line reference and central "command post" for all the utilities.
d. Norton Change Directory—shows structure of directory graphically, and lets you traverse subdirectories with many less keystrokes.
3. There are additional features added to almost all the utilities. The speed of many of the utilities has increased.
4. The menu system in the main NU program is easier to traverse and contains context sensitive help screens. In general it easier to find and extract data.
5. The Norton Advanced Edition includes all the programs and features of version 4.0 plus two new programs: Speed Disk (SD) and Format Recover (FR). Speed Disk is a disk pack program similar to what we offer subscribers free on the 1987 Subscriber's Disk. Format Recover allows hard disk users who mistakenly format their hard drive to recover their file if an initial precautionary step is taken.

In addition, The Norton Utilities main program (NU) offers Directory, FAT, and Partition Table editing. Also, as described at the start of this section, it contains a maintenance mode that allows **nu** to repair disks that are so damaged that DOS rejects them.

Recommendations and Upgrade Information

I strongly recommend The Norton Utilities to any user with a MS DOS system including all Portable and HP150 users. If your system includes a hard disk I suggest The Advanced Edition. Since the HP150 lends to damage disks, I would also recommend The Advanced Edition to any HP150 user. In general, version 4.0 might suffice for Portable users. However, if you transfer disks between different computers and disk drives, or if you want to do some exploring with the **nu** program, or if you have corrupted disks in the past with your Portable then you should opt for The Advanced Edition.

If you own version 3.1 of The Norton Utilities and you are an HP110 user, you probably don't need to upgrade. If you are a Portable Plus user, there are probably enough new features to make the $25 upgrade to version 4.0 or $39 upgrade to The Advanced Edition worthwhile.

Unfortunately, The Peter Norton Company won't let us upgrade your disks for you. You must contact *Peter Norton Computing, 2210 Wilshire Blvd., Santa Monica, CA 90043, (213) 453-2361.*

You can order the upgrade by phone, and according to reader Peter Brandenberg of Armonk, NY, they will take your word that own version 3.1. If you still need a 3½" disk, then send us $7.50 or send us a double-sided formatted disk and a self-addressed stamped envelope along with proof of purchase.

RIGHTWRITER 2.1

For those of you who ordered RightWriter 2.0 from us, we'll send you the new manual and disk for 2.1 in the usual manner. Send us $7.50 or a 6 x 9" self-addressed stamped envelope and a formatted double-sided disk. If you didn't order RightWriter from us, then send us $29.95 to upgrade. (We are handling all HP upgrades for RightSoft.)

The new version has over 800 new rules. There are 12 new rule classes, including checks for balanced punctuation and unusual capitalization. RightWriter flags sentences by inserting comments in the middle of the text. The new version works with MemoMaker, The Editor, WordPerfect, MultiMate, and MSWord and supports DOS paths.

Version 2.1 of RightWriter will work on both Portables. However, whereas the old version 2.0 required 231K of disk space and 204K of internal memory, the new version needs 341K of disk space and 216K of internal memory. HP110 users will have to run the program off an external drive; Plus users with lots of memory can run it internally.

We have now customized the 3½" disk that we send with RightWriter so that it automatically installs into the HP Portables and HP150. We also include instructions for running the program on HP machines. If you are having trouble with the version of RightWriter you purchased from us, send us your disk or $7.50 to receive this new disk. If you run RightWriter without difficulty you don't need this disk.

I must say I was initially skeptical about RightWriter. I had enough positive feedback from readers to put it on our price list. I finally tried it. When I used it, it definitely helped my writing. I'm just a little lazy to use it all the time.

What RightWriter does is insert comments within your word processing text. Very few of RightWriter's comments really made much of a difference to me when I tried it. However, two of its less sophisticated features forced me to examine my sentences again and again. First of all, it flags any sentence longer then 22 words. (It also flags complex sentences.) About 80% of the time when I found one of these long sentences, I was able to cut it down. The other helpful feature for me is its flagging of passive voice. For most kinds of writing, the only time a sentence should be in passive voice is when the object is clearly more important then the implied subject. Because of RightWriter's prompting, I changed the form of many such passively constructed sentences.

Gary Goodman is going to send us a short review of RightWriter and its supplementary dictionary, RightWords, soon.

RightWords

We also sell on 3½" disk RightWords, RightWriter's supplementary dictionary. This program allows you to add words to the existing dictionary or use one of seven auxiliary dictionaries with RightWriter. These auxiliary dictionaries contain jargon for Business Administration, Computers, Engineering, Weaponry, Navigation, Shipboard, and Aircraft. You can use a blank line on the order form if your wish to purchase RightWords from us for $29.95.

TURBO TUTOR II—NEW PORTABLE DISK

We goofed. When Borland came out with the new version 2.0 of Turbo Tutor for HP machines, I just assumed it would work properly on the HP Portables as did version 1.0. I was wrong. Rich Burmeister, our new Vice President in charge of products, has just created a supplemental disk. It contains versions of Tutor that will work on both the HP Portable and Portable Plus.

More than 50 time-saving utilities for your HP Portable or HP150—all on a single disk

Read this list.
It may look long and boring, but it can save you an incredible amount of daily effort.

It's a list of the more than 50 programs on *Portable Utilities Disk, Volume 1: DOS Tools.* Each program performs a specific task to make life with your Portable more enjoyable and productive.

The programs are all in the public domain, which means that if you searched long enough you could find them for free on various electronic bulletin boards, in magazines, and in the archives of local user groups. But consider this: Even if you had the time to track this many programs down, what about evaluating them and making sense of the documentation? It would be a formidable task, but we have good news: You don't have to do it—we've already done it for you!

That's right—we've combed through hundreds of public domain utility programs that run on the Portables and HP150, and have selected only the best ones for inclusion in *Portable Utilities Disk, Volume 1: DOS Tools.* We've not only made sense of the documentation, but in many cases we've actually rewritten it. (**A printed, 65-page user manual containing program documentation and plenty of examples in included with the disk.** The manual is *conveniently indexed by subject*, so all you have to do is look up the name of the task you want done. You don't have to remember the names of the programs.)

And we've even changed some of the programs themselves so they work better and so their message displays are easier to understand. (Given the state of the art in writing and testing software, there's no guarantee that every item of software works as documented without a hitch. However, most of the testing and evaluating was done by Hal Goldstein, publisher of The Portable Paper, and by Gary Goodman and Thomas Page. Anyone who has read Gary's and Tom's articles in past issues of The Portable Paper already knows of their conscientiousness and thoroughness.)

So look through the list. If even *one* program proves useful, *DOS Tools* could pay for itself immediately. With more than 50 documented and tested programs to try out and use, it's the bargain of the century. Order yours today.

Portable Utilities Disk, Volume 1:
DOS Tools $49.95
($39.95 for Portable Paper subscribers)

Contents of Portable Utilities Disk Vol. 1: DOS Tools

ADDCOL.COM Joins two files horizontally by appending corresponding lines.

ARC512.ARC Archived ARC file compression and library utility.

ARCE.COM Extracts ARChive files from ARC 5.12 and previous versions.

ASK.COM Adds interactive capability to batch files. Prompts user with message and waits for yes/no response.

BEEP.COM Makes a beep sound.

CHANGE.COM Changes or displays file attributes (read-only, archive, system, hidden).

CLEAN.COM Converts WordStar HP150 or Portable Plus MemoMaker document files to ASCII and removes control codes.

COPYNEW.COM Backs up files if no identical file on the destination disk. Also backs up whole directory structure creating matching subdirectories.

CPU.COM Displays computer's clock speed.

CVTBIN.COM Converts files from ASCII to binary when downloaded with CompuServe READ command.

CYPHER.COM Enciphers and deciphers a file to keep it confidential.

DIRALL.COM Displays attributes and pathnames for ALL files on a disk.

DIRS.COM Gives total disk space occupied by a set of files.

DUMP.COM Dumps and edits a disk or file in hexadecimal and ASCII.

FDATE.COM Changes the time-date stamp on a file.

FDUMP.COM Lists a file in hexadecimal and ASCII.

FF.COM Sends a form feed to the printer.

FGREP.COM Searches a group of files for a specified string.

HC.COM Converts binary files to/from hexadecimal ASCII files.

HP IBM.COM Does a "best fit" translation from HP ROMAN 8 character set to IBM PC Line Draw character set.

IBM HP.COM Does a "best fit" translation from IBM PC Line Draw character set to HP ROMAN 8 character set.

INSTALLP.COM Automates installing an application program on RAM disk—the HP Portable/Portable Plus Install Utility Program.

LABEL.COM Labels or changes the label name on a disk.

LC.COM Counts lines in each file; useful in determining amount of paper needed to print.

LF.COM Sends a line feed to the printer.

LJET.COM LaserJet pronter configuration program for the HP Portable. Makes selection LaserJet format easier.

MMTOP.COM Causes Portable Plus MemoMaker to print without usual 5-line top margin.

MOVE.COM Moves one file to another directory without copying.

MOVEALL.COM Moves a set of files to another directory without copying.

OFF.COM Shuts off the HP Portable from DOS.

PACK.COM Packs a disk. Does not have subdirectories bug of earlier version.

PC.EXE Allows some IBM programs to be run on HP150.

PCBOSS.COM File manager for IBM PC and compatibles only.

PRINTIT.COM Print formatting program, simple but effective.

PRNCONF.COM Allows ThinkJet printer to function as Epson printer; also sends escape sequences to the PRN device.

RAMDSK.ARC Archived utility for HP150 only; creates internal RAM disk.

RENDIR.COM Renames subdirectories.

RNGNAME.COM Displays and restores range names for Lotus worksheet.

ROMAN8.WKS Provides ability to enter any Roman8 character into Lotus worksheet.

SDL.COM Produces directory listings sorted by name, size, date, or extension.

SEPARATE.COM Breaks large text files into smaller files for MemoMaker.

SM.COM SpaceMaker. Converts. EXE files to .COM files and thus saves disk storage space and disk access time.

SQPC.COM Squeezes files to make them take up less space. Unsqueeze with TY.

TEE.COM Causes a program or file to be output to both the screen and a file or printer.

TJETA.COM Configures ThinkJet printer easily from the HP Portable.

TOWS.COM Converts ASCII document files to WordStar and Portable Plus MemoMaker format for editing and reformatting.

TRANSLIT.COM Converts one or more characters of one file to different character(s) and copies result to second file.

TREEDIR.COM Displays names of all files in each directory along with date, time and file size.

TRIM.COM Extracts selected columns from a file.

TY.COM Unsqueezes files squeezed by SQPC.

VDL.COM Allows user to selectively delete files from a group of files. Program lists files one by one and asks user whether to delete.

WAIT.COM Delays execution of a batch file until specified time.

WD.COM Saves and restores the working directory.

WHEAROUT.COM Gives percent of wear on disk in HP 9114 disk drive.

WHEREIS.COM Searches disk to find the specified file.

APPENDIX A Describes the contents of subdirectories/HP110,/SOURCE,/123DEMO found on the *DOS Tools* disk.

UTILS.DOC Reprints on disk *The Portable Paper* Vol 1, Issue 4, "Utilities" article. Gives practical examples of many of the files on the DOSTools disk.

RUNS ON:	
HP Portable	●
Portable Plus	●
HP150	●
IBM PC/HP Vectra	●
Available on EPROM/ROM	

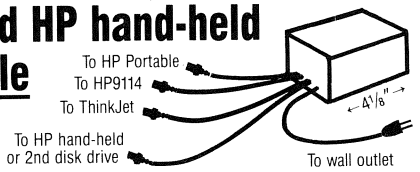
Now available on ROM Backup for the Portable Plus! (See ROM ad in this issue.)

60-DAY MONEY BACK GUARANTEE
See order form for details.

TO ORDER

Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
Personalized Software
P.O. Box 869, Fairfield, IA 52556 515/472-6330

Power your Portable, ThinkJet, HP9114, and HP hand-held from a single wall outlet.



Can't plug your Portable, ThinkJet, HP9114, and HP hand-held into the same wall outlet because the recharger cubes are too big? Here's the solution:

The Model 110A Power Cube Recharger from Summit Concepts.

The Model 110A has five power cords. Four are HP cords that plug into your HP Portable, ThinkJet, HP9114 disk drive(s), or HP hand-held (HP41, 71, 75, series 80, etc.). The fifth is a conventional AC cord that plugs into the wall and powers the other four.

Get rid of that tangle of extension cords, power strips, or whatever else you've been putting up with. Order a Model 110A Power Cube Recharger today.

Model 110A
Power Cube/Recharger $89.95
$84.95 for Portable Paper subscribers.

We mailed out free disks to all those who ordered Turbo Tutor after January 1. If you ordered Turbo Tutor 2.0 from us and did not receive the disk, drop us a line or call us, and we'll send you the free disk. If you ordered the older version and upgraded through Borland (by sending an old master disk and $10), then you can get the supplemental disk from us in the usual manner. Send us $7.50 or a formatted blank disk and a self-addressed stamped envelope with proof of upgrade.

DISK STORAGE CASES

A number of you who have ordered disks from us packaged in book-like storage cases have asked how to obtain empty cases. We'll sell them to you for $5.95 each. Just use the **MISC** field to write in "storage cases" on the order form at the back of the issue.

WORDPERFECT

Version 4.2 of WordPerfect for the Portable Plus has been available for several months now. Regular Plus WordPerfect users Chuck Carpenter and Paul Grimmer have promised to send us their comments on using the product in the Plus environment for a future *The Portable Paper*.

Although WordPerfect 4.2 adds features not in version 4.1, like the new Norton and RightWriter, it increases significantly in size. It seems the Portable user must decide whether all the new bells and whistles of a new version of a product is worth giving up the extra memory.

The philosophy in the software industry is that most IBM PC compatible users do or will soon own a hard disk, so disk space is not that critical as it once was. The equivalent in the Portable Plus environment is the new memory capacity. A 1.5 or 2.5 megabyte RAM disk would make a nice WordPerfect environment—room for the whole program, the speller, and the thesaurus.

You can still operate WordPerfect off the C drive with a minimum of 324K internal memory set from PAM's **f6 System Config Memory / Edisc**. If you want to put WordPerfect into the A drive you will need 268K for the main WordPerfect program and 13K of miscellaneous print files. So if you leave the WordPerfect speller off, WordPerfect will fit quite nicely in an 768K machine. The speller in RAM costs you another 290K of disk space and the thesaurus file takes up another 363K. Therefore, to run all of WordPerfect from the A drive will take 324K of internal memory and 934K of Edisc space, or 1258K total. Ready for that 1 or 2 Megabyte memory card yet?

SIDEWINDER

The latest version of SideWinder is 2.1. Most of you have 2.01. There is no functional difference between the two versions for Portable users. However, the new version is about 5K smaller: a little over 23K. If you want to update, do it in the usual manner: Send us $7.50, which includes postage, or send us a formatted disk and a self-addressed stamped envelope.

Reduced Pricing

THE WORD PLUS

The Word Plus retails for $150. We just reduced the *Portable Paper* subscriber discount price from $129 to $99.95. We feel The Word Plus is the spelling checker of choice for HP110 users. (We recommend Webster's for Portable Plus users. Plus users who bought The Word Plus from us may still trade it in for Webster's through August 31.)

PERTMASTER

Pertmaster is a high-powered project manager with versions that work on both the HP110 and Portable Plus. We have sold enough packages now to qualify for a bigger discount from the publisher. Pertmaster retails for $695; we will reduce the subscriber price from $545 to $499. Important: you must specify whether you want the HP110, Portable Plus, HP150, or IBM PC version of the product.

101 MACROS FOR LOTUS 1-2-3 1A

As of this writing, we have 20 sets of 101 Macros for Lotus 1-2-3 that we purchased several months ago that retail for $49.95. The current version retails for $69.95 ($62.95 to subscribers). The $49.95 supports only Lotus version 1A. The current version supports both version 1A and 2.01 (2.01 will soon to be available for the Plus).

If you have an HP110 or a Plus and no intention of upgrading to version 2.01, then you might want to purchase the $49.95 version while they last. You are probably better off ordering by phone, although you can try by mail. We can honor the $49.95 price only until we sell our remaining stock.

101 Macros not only provides you with many useful Lotus tools, it is an excellent way to learn how to use macros or to upgrade your current skill level. Remember: Portable users must press **Shift CTRL** and the macro letter rather than IBM PC invocation (the **Alt** key and the letter).

Your Vigilance Will Help Us Serve You

I would like your help in dealing with a delicate but vital issue that concerns the entire software industry: software protection. Please help us by telling any of your colleagues who want a copy of our software to purchase it from us. Your support in actively discouraging others from making illegal copies of our software and newsletter will help make us stronger and better able to support your Portable needs. Thank you.

·PORTABLE· PROFILES

Let us profile your or your company's use of the Portable. Tell us about your interesting or unusual application of The Portable. Or share a description of how you use The Portable: let other readers benefit from your experience. Give us a call (ask for Hal), or send us a draft on paper, disk, or via CompuServe. (Personalized Software, P.O. Box 869, Fairfield, IA 52256, 515-472-6330).

HP110, ThinkJet, Printer, Lotus, Make Brainstorming A Snap

The author, M.E. Kabay, is a computer consultant in Montreal, Canada.

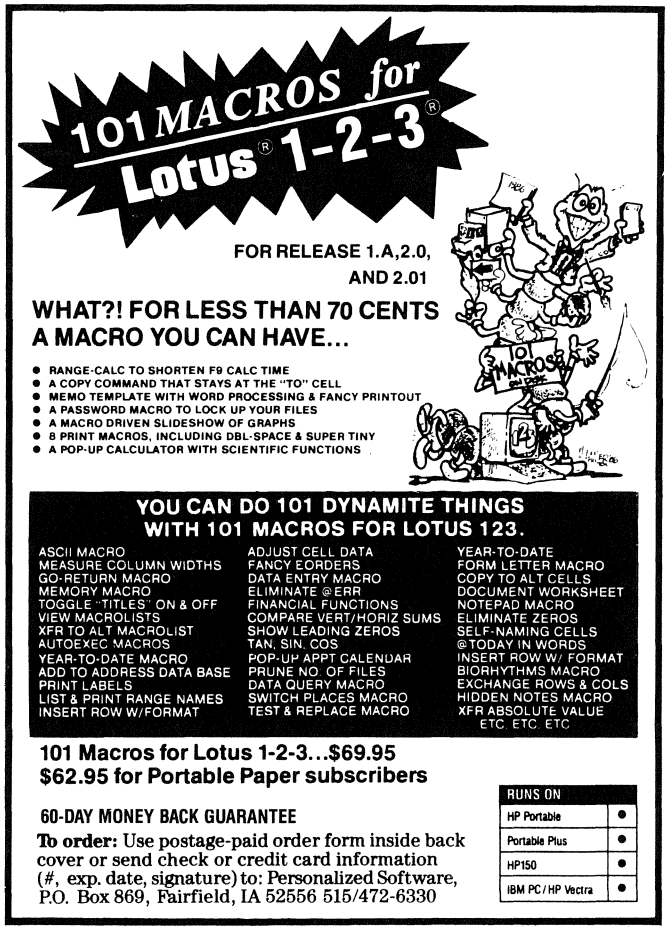
Brainstorming has been a popular way of generating ideas for years. The basis of brainstorming is that ideas come more easily when one separates synthesis from analysis. In practice, this means one bars criticism of ideas until as many as possible have been written down. A typical brainstorming session works like this:

1. A group of people gathers in a quiet place with plenty of markers, large sheets of blank paper, and adhesive tape;
2. The facilitator sets out the goals of the session; e.g., "Let's come up with all the ways we can improve production of the elujicator framsits..."
3. A specific numerical goal is set: "...and let's agree to have at least 100 ideas within the next 30 minutes."
4. People propose ideas; the facilitator writes them down immediately, WITH NO COMMENT;
5. No one is permitted to express any opinion of ideas that are proposed—no encouragement, praise, laughter, smiles, discouragement, disparagement, groans or frowns;
6. Any participant who suddenly gets an idea as a result of what someone else says can "hitch-hike" by signalling special priority (e.g., with a thumbs-up sign);
7. The facilitator tapes to the wall each sheet of paper as it fills up to allow everyone to see what's been suggested so far (even repetitions or similar ideas are simply written down without comment);
8. When the first goal has been reached, the facilitator asks for some more ideas—say, 10 more;
9. When those extras have been collected, the facilitator asks for a few more;
10. Finally, when no more ideas are forthcoming, the group turns to dealing with the ideas and grouping, analyzing, criticizing, and discussing them.

Portable microcomputers like the HP110 and Portable Plus are ideal tools for the analytical phase at the end of the brainstorming session. The traditional problem with all those ideas on the sheets taped to the wall is that the ideas cannot easily be ranked, grouped, and discussed without writing them down all over again—sometimes several times. Here's a way to use the unobtrusive accessibility of the HP Portables and the portable ThinkJet to solve that difficulty:

1. As the facilitator writes down the torrent of ideas on paper, a collaborator (the "operator") writes them down in a Lotus spreadsheet in a single column;
2. With a few keystrokes, the list is automatically numbered using the Lotus **/D**ata **F**ill command;
3. At the end of the creative phase, the numbered list is printed out immediately on the ThinkJet printer;
4. Each participant receives a copy of the list, whose numbers make it easy to refer to any individual idea;
5. Each participant evaluates each idea on a scale of importance from 1 (not important) to 5 (very important);
6. The operator then has each person read quickly down the list of numbered items and rank (e.g., "1—1, 2—5, 3—2, and so on) and writes that person's evaluation in a column to the LEFT of the items (one column per participant);
7. The operator quickly adds two more columns once the data have been collected from all the participants: an average (using the @AVG function) and the variability (using the @STD or @VAR functions);
8. The operator then **S**orts the list with a **P**rimary **D**escending sort on the average field and a **S**econdary **D**escending sort on the variability field;
9. The sorted list is then printed out again for further discussion.

Sorting by average simply produces a quick way of grouping points of importance so the discussion can focus on the more important issues (i.e., those with the highest average) first.



The use of the variability field is more interesting: the variance (or standard deviation, which is just the square root of the variance) is a measure of dispersion or, in more familiar terms, of disagreement. The more people disagree, the bigger the variance.

So, finding out which topics have the biggest disagreement can focus the group on just why that disagreement should be. In general, either someone knows something the others don't, someone believes something others don't, or people are using different rules of reasoning or have different values. In all of these cases, it is very productive to explore the differences: people become aware of factors they had not thought about. Sometimes people even change their opinions or come up with better ideas.

Although the technique could be used with a non-portable computer and printer, there are clear advantages to the Portables:

1. The Portables and ThinkJet require no power cords, so setting up is easy and quick, reducing distraction and bother;
2. Portables require no special arrangements; they take up a small amount of space on a table, or, in a pinch, on a lap;
3. The Portables are completely silent, unlike some non-portables, with their audible fans;
4. The Portables are small and unobtrusive; they do not impede the view of the operator;
5. The ThinkJet is quiet; people can continue to converse while copies are being printed;
6. The ThinkJet is sufficiently quick that copies can be made quickly even without a photocopier (use the MS-DOS **PRINT** command to set up as many copies as required in the print queue);

I use this technique in my consulting practice, and I assure you that my clients and I have much appreciated the power provided by those quiet helpers, the HP Portable Marvels.

Hang On To Your HP

The author, David Hughes, works for KW Control Systems as a field service engineer. He uses the Portable Plus in the field for site acceptance testing and his personal workstation. He recently purchased an IBM PC compatible laptop ...

Hang onto that old HP Portable, and don't give up on the Portable Plus. Although there are many other good portable computers on the market, they are all missing the boat when it comes to portability and survivability.

I purchased the original HP Portable because of its important ROM-based applications, long battery life, internal modem, size, attractiveness, and sufficient Memory/Edisc space. I used the Portable for nearly a year, and it never let me down, never failed me, nor was I ever short on memory.

The Portable Plus is an excellent second generation portable computer. Its usefulness continues to grow as new applications and hardware are developed. If the Portable can be likened to your personal secretary, the Portable Plus is the entire office staff. Loaded with plug-in ROM and disk-based applications, additional memory, and an internal 300/1200 baud modem, the Portable Plus remains nearly ultimate in terms of portability, despite some incompatibility with the IBM PC. Although expensive, the Portable Plus, in my opinion, represents an excellent investment. Most laptop computers on the market today feature two disk drives, IBM compatibility, a large memory, and a 300/1200 baud internal modem. Many of them boast extended battery operation. Some models feature an internal 10 Mb fixed disk drive.

I recently purchased an IBM compatible laptop computer in lieu of buying a more expensive desktop model, due to the relative age of the 80286-based computers and the introduction of the newer 80386 technology. This "other" laptop features 640K of memory, an internal 300/1200 baud modem, and two 3½" flexible disk drives.

After using my new "industry standard" IBM compatible laptop for nearly a week, I'd like to share with you some of my first hand impressions of why the HP is still my favorite.

Most Portable users take the features of their computer for granted. In order to start my new laptop, I must place a DOS system diskette in drive A and turn the unit on. Once DOS is active, my next mission is to find the diskettes that contains my application and data, insert them into the appropriate drives, and load the application. With the HP I just depress any key to wake the unit from sleep, move the cursor to the desired application, and depress the **Return** key. There are no disks to fumble with.

Many users complain about having to deal with PAM. It is an excellent user interface, especially if your HP runs as an "applications engine". It's always possible to bypass PAM by loading DOS commands as an application. The competition's interface is still the DOS **A>**. PAM resides in ROM, and immediately appears when the Portable is turned on. PAM keeps life simple for the novice, and can be easily bypassed by the advanced user. My experience has shown that those who have PAM often want to bypass it, and those who don't have it want it badly.

The lack of built-in flexible disk drives has always been a controversial issue. To date, none of the HPs feature them as a part of the main computer, but offer them as an external mass-storage device. This may appear as an immediate disadvantage for the HPs, but I consider it a hidden advantage:

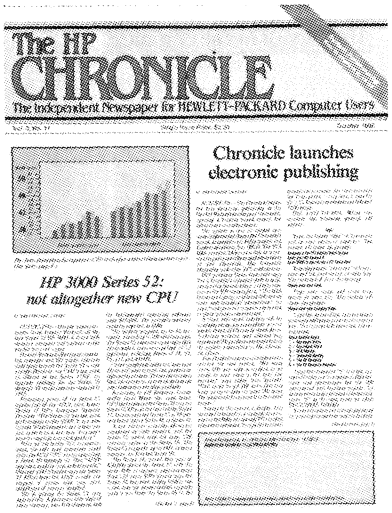
1. Built-in disk drives introduce mechanical components inside the body of the computer. They make the computer more fragile, and introduce an opening to the environment through the drive doors.
2. Applications are stored on flexible disks, not electronic disk or ROM. If you've ever walked through airport security and forgot that your disks passed through the x-ray machine, you may be in for a surprise when you use them. I have never lost a byte of information on the electronic disk due to airport security machines.
3. Although many laptops boast long battery life (4 to 6 hours), none of them can compete with the 20 hours offered by the HP. If you've ever made use of your Portable during transcontinental or international flights, you know that battery life is very important.

I frequently use my Portable Plus in an industrial environment. I sincerely believe that an "industry standard" laptop wouldn't survive, due to the fragile nature of the diskettes and the drive openings. Most other laptops are well suited for the home or the office, but can't take the torture of an industrial environment.

Another HP feature that is often overlooked is the durability specification. If you've ever accidentally dropped your Portable or 9114 disk drive and found the unit

PCI delivers the news!

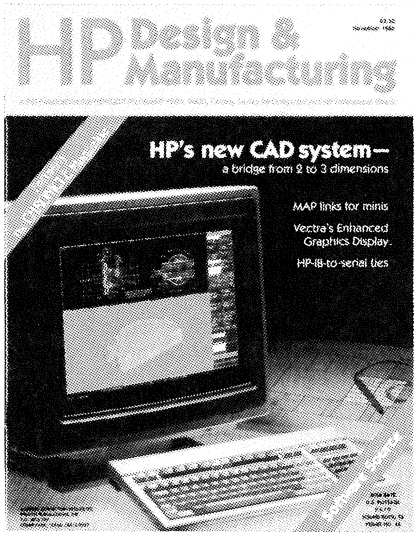
News



The HP Chronicle

The only newspaper devoted exclusively to HP 3000 computer users. Each monthly issue includes the latest news, productivity tips, new products, help columns, and classifieds.

Scientific Data



HP Design & Manufacturing

The journal for scientists, engineers, and others who use HP technical computers. Each monthly issue includes programming tutorials, new product updates, applications features and technical trouble-shooting.

and Training

SVP Software Video Productions

Training courses for the HP computer user. Software Video Productions offers USING EXECUTIVE MEMOMAKER for the HP 150 and USING WALKER RICHER & QUINNS REFLECTION SERIES for the HP 2622 and 2392 Communications. Up-to-date training techniques and individualized instruction at affordable prices.

SUBSCRIPTION MEMBERSHIP APPLICATION

Name _____ Title _____

Company _____

Address _____

City _____ State _____ Zip _____

Phone _____ Equipment _____

☐ Check enclosed
☐ Bill me
☐ Charge to: VISA, MasterCard, American Express

Card # _____ Expiration Date _____

Signature _____

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US $38 Foreign $72

☐ ***HP Design & Manufacturing***
US $42 Foreign $78

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U.S.A. (800) 531-5093 or in Texas call (512) 250-9023.

not only operational but unscathed, you've successfully exercised one of HP's unspoken features. I remember when HP featured similar stories about the durability of their calculators. The Portables are equally tough. I dare say you'd probably be looking for a dust pan to pick up the pieces for some of the other laptops, since no durability specification exists. (GRiD computers are an exception.)

If any of you HP Portable users are considering giving up your HP for a new "industry standard" laptop, consider this. When your new laptop runs out of power on a New York to San Francisco flight, or you corrupt not only your data through an airport X-ray machine but the application program as well, or you foul the heads of your new disk drives with construction dust, you'll wish you had your ol' reliable HP!

The Total HP110 Environment

The author, Juan Melendez, is a chemical engineer with 12 years of international marketing management experience. He has worked for such companies as Seagrams, General Foods, and Campbell Soup. He currently heads all the Hispanic marketing efforts of Campbell Soup, reporting to the president. His hobbies include wind surfing and computers.

OVERVIEW

Marketing centers around communication, analysis, and project/time management. In this article I'll share how I structure the HP110 environment to fit my daily marketing activities. First I'll show you my selection of software and peripherals and an overview of the whole system. Then I'll discuss how I operate the environment from my PAM menu—the "Houston Control Center" of my operation.

As you will see, there is nothing really new in this configuration; what is unique is how I have combined many diverse elements into a coherent whole, creating a system that quickly and easily backs up and wipes out the electronic disk so I can run and store programs requiring lots of memory, such as *Pertmaster* and *RightWriter*. I have put together many of the products and ideas from past issues of *The Portable Paper* to make a powerful system that works for me. Most of the products I mention can be ordered directly from Personalized Software, publishers of *The Portable Paper*.

THE COMPONENTS OF THE SYSTEM

The five basic elements of my system are the HP110 the A, B, and C drives and Portable peripherals.

The A Drive

I run the whole system from a series of batch files residing on my A drive. The A drive also contains the **pam.mnu** file that customizes my PAM screen and software that augments built-in B drive programs. I use the PAM screen and batch files as "Houston Control" to run the program I want. This may require clearing up A drive space and running a program from my C drive.

The B Drive

The B drive contains Lotus, my spreadsheet program, MemoMaker, my word processor, and Terminal, my data communications software. To augment Lotus, I use an auto-load 1-2-3 file and *101 Macros*. A MemoMaker format file, Mini-PrinterTalk, and a MemoMaker destructive backspace batch file enhance MemoMaker. Finally, auto-answer files and a 1200 baud modem enhance Terminal.

The C Drive

I conceptually divide my C drive files into three categories—Time Management, Project Management, and Utilities. My Time Management files consist of names, addresses, phone numbers, appointments, to-do lists, and the calender printing program. Project Management programs consist of *Pertmaster*, *Condor Junior*, and dBASE II. Finally, my Utilities include *The Word Plus*, *RightWriter*, *Norton Utilities*, *SideWinder*, **diskpack** and others from *The Portable Paper 1987 Subscriber's Disk*, and *DOS Tools*.

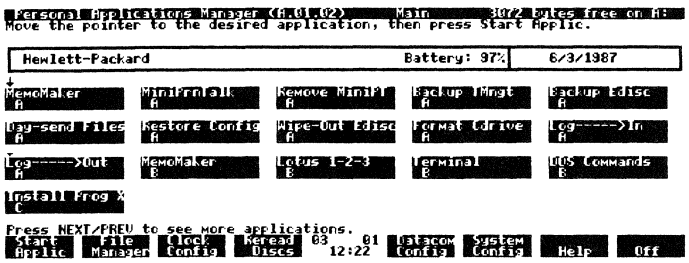
Peripherals

1. Two HP9114 disk drives and the HP ThinkJet printer.
2. WorldPort 1200 baud modem, to speed information to and from the office.
3. HP-IL interface card for the IBM PC, to transfer Lotus 1-2-3 files.
4. Power Cube/Recharger, to simplify connections.
5. Two HP9114 Empowerers, to avoid running out of juice and to run dBASE II from the C drive.
6. Mobile Recharger, to charge my Portable on the road.

PAM: MY HOUSTON CONTROL CENTER

The basic operation runs via PAM. A series of simple batch files control everything. As I said before, the key to creating a practical system is to be able to quickly and easily back up and wipe out the electronic disk so that programs which require lots of memory to run and store, e.g., *Pertmaster* and *RightWriter*, are a dream to use.

Here is a screen dump of the items in my PAM screen (with an imaginary extended screen for the purposes of this figure):



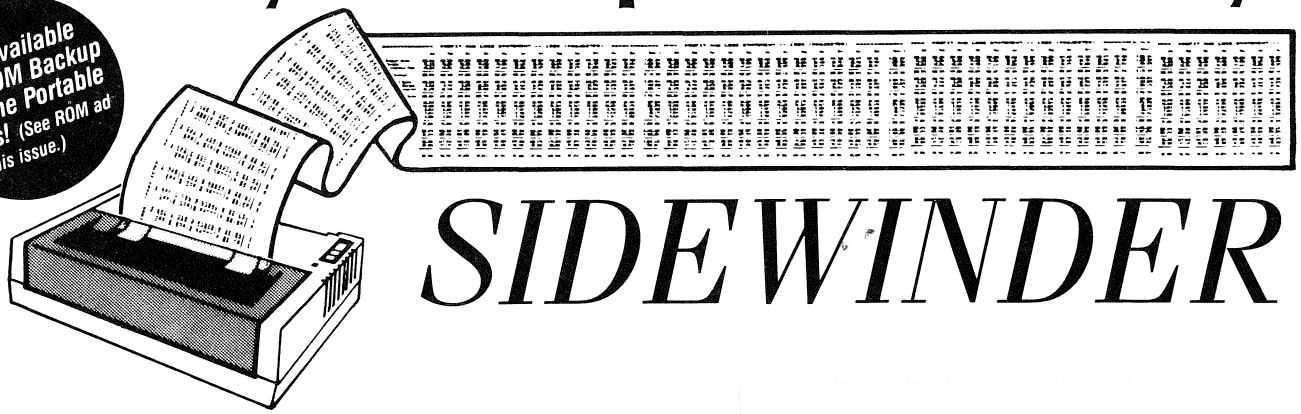
The PAM screen gets generated automatically by the HP110. The HP110 is programmed to look for a file called **pam.mnu** that I created in MemoMaker. The required format of the **pam.mnu** file is simple. Each entry in the **pam.mnu** file consists of two lines. The first line (14 characters or less) contains the name of the application that you want to appear on the PAM screen. The second line is the name of the program or batch file that you want to run when the application begins.

Here is the **pam.mnu** file I created in order to generate the PAM screen illustrated above. The *PrinterTalk* lines in **pam.mnu** are created automatically when I install *PrinterTalk* from a copy of my *PrinterTalk* master disk.

MemoMaker
mm
MiniPrnTalk
minipt
Remove MiniPT
remove minipt.ir$
Backup TMngt

No more cutting and pasting- Now you can print it sideways!

Now available on ROM Backup for the Portable Plus! (See ROM ad in this issue.)



SIDEWINDER

At last! Sideways printing for the HP Portable, Portable PLUS, and ThinkJet!

(And the HP150, Vectra, IBM PC, MS-DOS computers, and most HP graphics printers.)

It's called SideWinder, and it's perfect for Lotus 1-2-3 print files, MemoMaker files, or any other text (ASCII) file that's too wide for a normal page.

Just type in the file name, and SideWinder does the rest, printing up to 53*rows *sideways* - for as long as your paper supply lasts. You'll never need to cut and paste again!

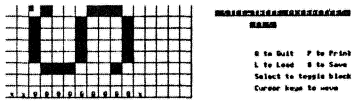
SideWinder's high-quality graphics characters are indistinguishable from ordinary characters, and SideWinder prints just as fast as your ThinkJet can.

In addition, a built-in mini text editor lets you get inside your print files and easily create double-width characters and underlines.

SideWinder $69.95
$59.95 for Portable Paper subscribers

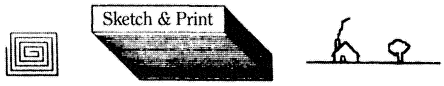
OPTIONAL EXTRAS: Southern Software of New Orleans, creators of SideWinder, have also created two companion utilities that work only on The HP Portables:

SideChar lets you create your own sideways characters.



Simply fill in a grid on your Portable to modify SideWinder's built-in characters. . .create italics. . . Hebrew letters. . . integral signs. . . whatever sideways characters you wish.

Sketch & Print lets you make line drawings on your screen using the cursor and function keys.



It's a lot like those Etch/Sketch toys you played with as a child. (Actually, it's even better because you can draw not just horizontal and vertical lines, but also *diagonals* with a single key.) Sketch & Print also lets you print - and save - anything you draw on the screen.

$10 for both utilities when purchased with SideWinder

Order form and guarantee are on inside back cover or send check or credit card number to Personalized Software, PO Box 869, Fairfield IA 52556 (515) 472-6330.

SideWinder 1.01 owners may upgrade to current version 2.01, which supports 8 chars/inch, by sending Personalized Software $7.50 or by mailing a self-addressed $.39 stamped envelope and the SideWinder master disk.

*105 rows for QuietJet Printer

Lotus and 1-2-3 are registered trademarks of Lotus Development Corp.

tb
Backup Edisc
backup
Day-send Files
daysend
Restore Config
conf
Wipe-Out Edisc
formata
Format Cdrive
formatc
Log----->In
log in
Log----->Out
log out

As you will see, what I have done is to pull together much of the information found in past issues of *The Portable Paper*. To save space and avoid redundancy, I reference past issues. For example, a discussion of creating a destructive backspace key for HP110 MemoMaker is found in Vol. 1, No. 1, p. 2 of *The Portable Paper*, or *(PP, 1:1-2)*.

Below is a discussion of what each of the PAM applications in the above diagram do and how they do it. Included are the batch files that have not been published. They all have one thing in common: they are simple.

1. **MemoMaker A** *(PP,1:1,2)*. Writing is my most frequent marketing activity. This application runs MemoMaker, first redefining the **f7** key as destructive backspace (backspace then delete character).

2. **MiniPrnTalk A, Remove MiniPT A**, *(PP,1:3-21)*. All my MemoMaker work prints via Mini-PrinterTalk—a streamlined version of *PrinterTalk* (less space, virtually the same functionality) that comes with the *PrinterTalk* disk. Using Mini-PrinterTalk with MemoMaker files means my memos have fancy expanded bold letters. The pages are numbered

Charge your Portable (and HP9114 and ThinkJet) off your car's cigarette lighter!

It's the Mobile Ni-CaD Recharger (MNR-2) from S.O.S., and it couldn't be easier to use: simply plug one end into your car's cigarette lighter and the other into your Portable, Portable Plus, HP9114, or ThinkJet.*

The time it takes to charge a given unit is about 30% longer than with a wall charger. Your car does not have to be running—the unit can operate overnight with no danger of running down a normal car battery.

Mobile Recharger $29.95
(Sorry, we are unable to discount this unit)

*Also works with HP41C/CV/CX, HP71B, and HP75C/D hand-helds: HP82143 and HP82162 printer/plotters; HP82161 cassette drive; and rechargeable reserve battery packs for all these devices.

and the number of lines per page is controlled. The Remove option gives the flexibility of creating more room in the Edisc.

3. **Backup TMngt A**, *(PP,1:5-27)*. This is a simple batch file to copy back the files Time Manager creates to the C drive, allowing you to run Time Manager once or twice a day from the C drive. I also use the **tma.com** (from the *1987 Subscriber's Disk*) to view a whole week and print a full month of Time Manager appointments. Very impressive!

File: tb.bat

```
pause Insert TMngt disk in C drive:
echo off
cls
if exist a:tm.nam copy a:tm.nam c:
if exist a:tm.tdo copy a:tm.tdo c:
del a:tm.*
cls
```

4. **Backup Edisc A**. I use the **xcopy.com** from my *1987 Subscriber's Disk*. In the batch file, I include a pause to remind me to have a blank formatted disk in C drive.

File: backup.bat

```
pause Insert FORMATTED backup disk in C: drive...
xcopy a: c: /9Q
```

5. **Day-send Files A**, *(PP,2:3-1)*. This is a neat way to create an updated backup disk of your current work. Use **copynew.com** from Personalized Software's *DOS Tools* disk.

6. **Restore Config A**, *(PP,1:4-32, 1:5-29)*. When I wipe out my Edisc to run a big program, I copy back my custom configuration files. These files include two for my DOS environment—**config.sys** and **pam.env**—and two for MemoMaker -**mm.bat**, and my **startup.fmt**.

(This configuration makes my HP110 run faster. The **config.sys** file increases disk access speed. The **pam.env** has increased my real clock speed by an average of +.10mhz. I used **cpu.com** from *DOS Tools* to measure the actual clock speed.) [Ed.—This issue's *Looking Glass* column continues the discussion of the **pam.env** file.]

File: conf.bat

```
pause Make sure Edisc is ready. . .
pause Don't forget to reset the computer. . .
echo off
cls
if exist c:config.sys copy c:config.sys a:
if exist c:pam.env copy c:pam.env a:
if exist c:startup.fmt copy c:startup.fmt a:
if exist c:mm.bat copy c:mm.bat a:
cls
```

7. **Restore Edisc A**. This is to get back my Edisc files that I had to back up when I ran *Pertmaster* or a *RightWriter* session. Here I also use **xcopy.com** and a pause to make sure I have enough Edisc space.

File: restore.bat

```
pause Make sure Edisc has enough storage space. . .
pause Don't forget to reset the computer. . .
xcopy c: a: /9Q
```

8. **Wipe-out Edisc A**. Hal Goldstein gave me this tip. Formatting the A disk wipes out your Edisc files (including all subdirectories) very quickly. You need to do this to run *Pertmaster* (loads into Edisc) and *RightWriter* (needs 228K of memory).

File: formata.bat

```
format a:
```

9. **Format C Drive A**. This is to prepare your backup disk.

File: formatc

```
format c:
```

10. **Log . . . . >In/Out A** *(PP,1:6-29)*. I keep a time log by marketing activity. I also track what activities in which I spend most of my time. You can use this information to charge your customers.

11. **Lotus 1-2-3 B**. This is the heart of marketing what-if scenarios, sales studies, and finance and budget projections. The **autol23.wks** file from *1987 Subscriber's Disk* is a real plus. Its menu gives you the flexibility to change directories and retrieve any listed file. The *101 Macros* software takes Lotus to the limit. I used *101 Macros* to personalize Lotus for my needs.

A NOTE ON UTILITIES

Utilities are an important element in the system. *The Word Plus* deletes the speller from your mind. *The Word Plus* look-up function eliminates the need for a paper dictionary.

This document has been processed by *RightWriter* several times. *RightWriter* will make your adrenalin run for a few weeks. *RightWriter* provides intelligent communication feedback for business people. A last utility is **diskpack** from the *1987 Subscriber's Disk*. **diskpack** sorts the files on any disk, fixes fragmented files, and packs a disk.

Finally, I don't save MemoMaker files to subdirectories since *The Word Plus* and *PrinterTalk* can't access subdirectories directly. I make all my memo file names start with **m** so that **diskpack** sorts them automatically.

MY DAY

I start a typical day by loading **Time Mngt** from the C drive. I spend the first hour updating my appointments, revising things to do, and making phone calls. If I have to write a monthly report, I use **tma.com** from the *1987 Subscriber's Disk* to print all my appointments/activities.

Next follows my writing via MemoMaker and mini-PrinterTalk. I give my secretary all the originals to do the copies and mailing.

Then, if any of my memos/reports need *RightWriter*, I do the following from the PAM menu:

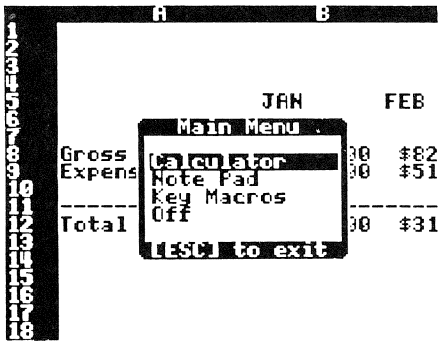
Now available on ROM Backup for the Portable Plus! *(See ROM ad in this issue.)*

Instant Access Pop-Ups for the Portable Plus

■ CALCULATOR ■ NOTEPAD
■ MACROS AND MORE

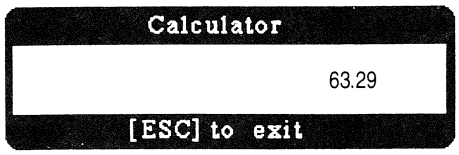
It's a program called Shelp *(shell + help)*, and it runs on the Portable Plus from within any non-graphics program. Here's all you do:

Press [Ctrl] [Shift] [Extend char] and up pops the Shelp menu:



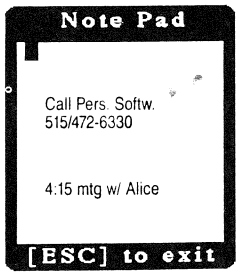
Choose **Calculator** and get a 4-function calculator that works just like a pocket calculator with memory. You can:

- save results in ten different storage registers and retrieve them again with two quick keystrokes
- "paste" results at the cursor location in whatever application you were using when you invoked Shelp.



Choose **Notepad** and a "scratch pad" pops up on your screen. Type whatever you want into it, exit to your application, and then recall the notepad whenever you want.

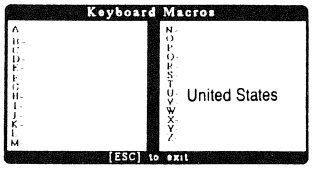
No more having to scribble notes on paper to remind you of phone numbers, things to do, or bright ideas!



Choose **Key Macros** and you can assign "strips" of up to 31 typewriter characters to any of the 26 letters in the alphabet. This saves you having to type the same phrase over and over again.

Example: If you type "United States" a lot, you could assign the entire phrase to the "U" key. Just move the cursor to "U:" in the Keyboard Macros menu and type "United States."

To recall "United States," simply press [Ctrl] [Extend char], then [U]. Presto—"United States" appears at the cursor location in your application!



Choose **Off** and your Portable Plus turns off without having to return to P.A.M., and without having to save your application file. When you turn your computer back on, you'll be in the same place in the same application, with no data lost.

All the capabilities of IBM-PC programs like Borland's SideKick and SuperKey? Certainly not, but Shelp's the only such program for the Portable Plus. It's a clean, easy-to-use, and highly useful helper you'll want at your fingertips always.

Shelp runs on the Portable Plus only. It works with Time-Manager, MemoMaker, Reflection 1, Lotus, and any other non-graphics program. (Shelp does not run with MS Word.)

Shelp was written by Randy Salo, the former HP engineer who authored MemoMaker on the original HP Portable.

Shelp . . . . . $55 ***($49.95 for Portable Paper subscribers)***

60-day no-risk trial: If, after 60days you are dissatisfied with this product for any reason, you may return it for a full refund. **To order,** use the postage-paid form at the back of this issue, or send check or credit card number to: Personalized Software, P.O. Box 869, Fairfield, IA 52556 515/472-6330

SideKick and SuperKey are registered trademarks of Borland International, Inc

1. Format backup diskette in C drive.
2. **Backup Edisc** to C drive.
3. **Wipe-out Edisc.**
4. Reconfigure the memory to 228K.
5. Restore the system configuration (**Restore Config**) and reset the computer.
6. Copy the file(s) to be right-written from C: to A:.
7. Run *RightWriter* from C drive, use: **c: right a:filename**.
8. Copy revised files back to the backup diskette in the C drive.
9. **Wipe-out Edisc** and reconfigure original set-up.
10. **Restore Edisc** and reset the computer.

Note: to reset the computer, press the contrast key and hold it for 15 seconds.

This seems like a lot of steps but is worth it, because of the usefulness of *RightWriter*, the most powerful software to clean up communication that I have yet seen. In taking these steps, you'll understand why I call the PAM menu "Houston Control". *RightWriter* needs only one command (**right**).

Having run *RightWriter*, I am finished with organization and writing. Next is my project management, for which I use *Condor* and *Pertmaster*. When I run *Pertmaster*, I follow steps similar to those I described for *RightWriter*.

My final activity is business/data analysis. Lotus 1-2-3 is the software I use. I won't go into the details. However, here are some comments. The **autol23.wks** from the *1987 Subscriber's Disk* is a must; this utility provides the loading flexibility you need. And *101 Macros* customizes your spreadsheets. These macros have helped me set up the following types of spreadsheets: market size/share/volume and spending projections; financial, what-if scenarios; home and business cash-flow analysis; sales tracking, budgeting and projections; tracking and control of marketing spending; calculation of the cost of a new product introduction; and the sale and purchase of real estate property.

None of these tasks are new; the power comes from using macros. Be creative!

It is good to note that I frequently use Time Manager during the day. This tool keeps me on top of the business at all times.

Lastly, I use **daysend** at the end of the day to back up my day's work.

This covers the marketing activities for a typical day. That is it! I welcome your feedback!

Here is my conclusion: *Shut down your IBM AT. A versatile HP110 at 5.43 mhz is worth more than 10 mhz of MultiMate and Lotus 2.01.*

Corporate Users

Corporate users, let us send a *Portable Paper* to all your company's Portable users. Contact us for special corporate rates.

A Drive—Application Software in RAM

T/Master A PLUS

By David Hughes

Introduction

Brilliant and innovative products are often known for their ability to solve complex problems with a singular, unifying theme. T/Master is an example of such brilliance, because it consistently solves your problems in the same manner, whether it involves writing a letter, designing a complex spreadsheet model, or managing a multi-file database.

T/Master is a friendly, fully integrated business application from T/Maker Company. Designed primarily for the IBM PC, it runs on the Portable Plus without modification, and on the HP150 under the PC emulator. The program logically integrates a full-featured word processor, 55,000 word speller, relational database manager, spreadsheet, bar chart graphics, keyboard macros, and file management. In addition, the T/Maker Company has customized its communications module so that it runs on the Portable Plus.

The Intelligent Chalkboard

T/Master's approach to integration is amazingly simple and straightforward. Unlike other integrated software products that require you to memorize different work "environments" (word processing, spreadsheet, database), T/Master begins to solve your problems with the editor, or "Intelligent Chalkboard".

It is quite surprising how easily problems can be solved by using a chalkboard. It promotes freedom of expression, yet always enables its viewer to maintain a good perspective of the developing solution.

T/Master's editor is remarkably like a chalkboard, being 400 columns wide and very, very long. The active area is defined from the current cursor location to the end of the file. The editor isn't particularly concerned whether you're working on a document, a spreadsheet, a database, or a graph, since all files created by T/Master are just plain ASCII text. Just as it is possible to express ideas, relationships, calculations, and concepts in the form of notes, graphs, and tables on a chalkboard, T/Master is quite capable of handling text, tables, database, and bar chart graphics all within the same disk file.

Integration is as simple as "What Next?". This familiar prompt appears in the lower left hand corner of the display. Most functions are performed with easy to remember, English-like commands. If you can't remember the commands, the help facility and command menus serve as excellent guides. The program may be completely operated from its menu-driven interface. For expert users, the menus may be completely turned off. Nice touch!

What follows is a review of each of the major components of the T/Master system: The Editor, Speller, File Manager, Database, Spreadsheet, and Communications.

The Editor

The editor is the heart of the T/Master system. It is the primary tool which enables you to write a letter, a report, create a spreadsheet, a macro, or design a new database. What's most important about the editor is that, like a chalkboard, it is very easy to use. The editor boasts the following basic word processing features: Search and Replace; Block Copy, Delete, and Move; Single Level Undelete; Table, Manual, Insert, and Wordwrap Edit Modes; Advanced Cursor Control; "Frame" Mode (for editing tables); "Stripe" Mode (for editing table formulas); and Paragraph Formatting—Left, Right, Center, Justify.

In addition to these basic editing and formatting features, the editor provides you with ten typefaces, soft hyphens, advanced paragraph alignment, proportional pitch capability, and print design commands (for advanced formatting). Several of the typefaces (such as bold and underline) are also displayed on the screen. An invisible typeface gives you the option to leave non-printing comments within the text.

Align commands are special instructions in the form of aligning "wedges" that provide paragraph alignment information in situations where mixed paragraph formats (i.e., left, center, and right aligned, right justified) are required within the same document. The aligning wedges are necessary only when a variety of special paragraph alignments are required. For most of your work, you'll probably align or justify text after you've finished with a paragraph or page.

Design commands instruct the printer how to control widows and orphans, page length and width, page breaks, line spacing, hidden text, multiple line headers and footers, protected blocks (i.e., tables or graphs), and footnotes. Several "counters" are provided for automatically numbering paragraphs and figures, and preparing a table of contents during printing. Design commands also control merged printing, printing the time and date, "cleaning" formulas from tables, and automatically numbering pages. T/Master supports a variety of printers, including the HP ThinkJet and LaserJet.

Advanced Text Formatting

Perhaps the most innovative feature of the editor is the manner in which it manipulates highlighted or marked text. A block is a highlighted passage of text (word, phrase, line, sentence, or paragraph). A zone is a text rectangle, used for creating columns or tables of arbitrary dimension. There is no limit to the number of text columns you can create, as long as the total width of the layout doesn't exceed 400 characters.

T/Master easily produces newspaper-style layouts (i.e., snaking or parallel text columns), allowing you to completely surround tables and bar chart graphics with text. All of the text columns may be justified. Furthermore, the merge command can overlay a disk file upon the working area, like a transparency. No other word processor currently available can so easily perform these functions, although several products (such as WordPerfect and MultiMate Advantage) provide line draw and text columns. T/Master's elegance is in its simplicity and willingness to solve your problem. Columnar layouts produced by T/Master can be viewed by virtually any text editor, including MemoMaker and The Editor.

The editor may be operated completely from the command menus, which appear at the top of the display. Users who like a "clean screen" will love T/Master: the command menus, ruler line, and information lines may be turned off, freeing all 24 lines of the display for editing text and document layout.

Additional Editor Features

The editor features a powerful sort utility, allowing you to sort columns or blocks of text in ascending or descending order, based on a criterion range. A sort may be alphanumeric, numeric only, by date, or by time. It is even possible to rearrange the sequence of columns in an active area!

The editor is the gateway to many of the other major program features. From within the editor it is possible to define keyboard macros, use a zone as a "scratchpad calculator", compute tables, perform a spelling check, and create bar chart graphics.

The Speller

The speller is activated from the "What Next?" prompt or from within the editor. Once the spelling check has been completed, T/Master prepares a correction list, a statistical report, and flags all unfamiliar words. The user then edits all unfamiliar words, and depresses **f6 C** (Correct) to correct all of the errors in the text. The statistical report tells you the total number of words present in the active area, the average number of words used in a sentence, the average number of characters in a word, and the total number of unique and unfamiliar words.

File Management & Utilities

In addition to a highly competent word processing environment, T/Master provides a comprehensive file management facility. Once loaded, there should be no further need to return to DOS except to format disks, make new directories, or to copy files from one diskette to another.

The file maintenance utilities include rapid cursor positioning, file creation, deletion, merge, view, rename, search/replace, password encryption, "cleaning" (the process of removing spreadsheet formulas), and changing the supported printer.

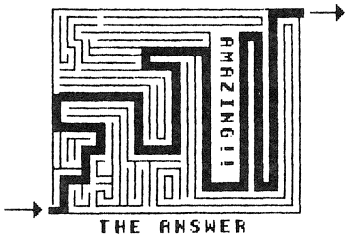
The Database Manager

The database manager is quite complete, and powerful enough to compete with dedicated database products like dBASE III. Sonja Roizen, Vice President of T/Maker Company, tells me the database features of T/Maker (an earlier product) and T/Master have been used to maintain all of their company's database information, including payroll, inventory, and sales prospects. Unlike many other database managers, T/Master can relate separate datafiles to each other with common data fields.

The database editor, Update, like the word processor, Edit, operates on ASCII text. It is used to enter, revise, or delete data from a database file.

Typing Whiz is one of the better typing programs on the market and is priced competitively. If you want to learn or improve your typing, buy Typing Whiz. Typing Whiz is on my highly recommended list.
—*Dave Mark, L.A. Scrug Notes, newsletter.*

At last! Graphics



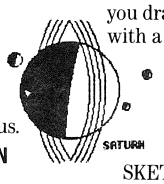
for the Portable and Portable Plus

by Hal Goldstein
President, Personalized Software

Paul Grimmer has done it again.

He's the author of two of our best-selling programs: SideWinder (the sideways printng program for the HP Portables) and LINK (the program that lets you transfer data back and forth between HP hand-helds and Portables, printers, and other peripherals).

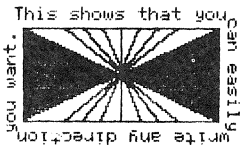
Now he's developed SKETCH, a fabulous graphics program designed for both the HP110 Portable and Portable Plus.



CURSOR BECOMES DRAWING PEN

Using SKETCH couldn't be simpler:

Put SKETCH in *draw* mode, and your cursor becomes a "pen". The pen can either be "up" or "down." When it is "down," it draws wherever you move it. When it is up, you can move it around the screen without affecting the drawing. (You set the cursor up or down simply by pressing "U" or "D." You also can set the cursor speed, and can toggle between a faster speed and a slower speed in an instant.)



The pen also has an "eraser": Just press "E," and when the cursor is down it will erase whatever it encounters.

DOZENS OF HANDY FEATURES

But that's just the beginning. SKETCH also lets you draw diagonals, boxes, circles, and arcs—each with a single key.

(If you have a mouse, you gain even more convenience: Move the mouse in any way you want, and the cursor follows instantly. See ad on the Logitech Mouse for the Portable Plus in this issue.)

SKETCH also lets you fill closed shapes with light or dark solid—or even invert the entire screen (light areas become dark and vice-versa)—with a single keystroke.

With SKETCH, you can create text in any of 5 different character sets and place the text anywhere in your drawing—including sideways or even upside-down.

SKETCH lets you save part or all of any drawing for future use, or you can print directly from the screen onto your ThinkJet or QuietJet pages.

RUNS ON:	
HP Portable	●
Portable Plus	●
HP150	
IBM PC/HP Vectra	
Available on ROM	

You can also import graphics screens into SKETCH from Lotus or any other graphics program.

SKETCH doesn't limit the size of your dreawing area to the size of your screen. The total drawing area is 70% bigger than the screen on the Portable Plus, and more than 150% bigger than the screen on the Portable. As you move the cursor past your screen's borders, SKETCH automatically shifts you into the areas that were off-screen.

Now you might be expecting that all these great features come at a high price in terms of memory space. But they don't. The entire program takes up only 44K! (As I said, Paul Grimmer has done it again.)

USING IS BELIEVING

No matter how fired up you might get by reading about SKETCH or looking at the few samples we've shown of what it can do, there is no substitute for actually getting your hands on this wonderful program and trying it out for yourself.

Remember, with our money-back guarantee, if you are not completely satisfied with SKETCH within 60 days, you can return it for a full refund. Why not order a copy today?

SKETCH graphics program . . . . . $80.
$75.95 for Portable Paper subscribers.

A database file's definition or structure is first created by T/Master's editor, and consists of several format definitions. A record definition defines the structure and field names of the data. A screen definition defines how the data will be presented on the display. A single data file may contain more than one screen or record definition. Multiple definitions are very useful for working with different data structures within the same database file. Although this may seem complex, it is an amazingly easy and flexible way of creating a data structure.

If your database requires the identification of numerical relationships between data fields within the structure, you may define rules and global definitions. Printed reports are easily formatted directly with the database by implementing report definitions. Reference definitions direct T/Master to locate, retrieve, and relate data from a designated disk file. Like the record and screen definitions, T/Master allows multiple rules, reports, and references. Indexing a database saves time searching the entire disk file for reference definitions.

Many of these features are available from the "What's Next?" command prompt.

However, some of the features (like Process) are available from within the database editor, Update.

There are several advanced functions which make data manipulation more productive and less cumbersome. **Process** executes the rules, reference, and report definitions as they appear in the datafile. **Order** arranges the records in ascending, descending, alphabetic, numeric, date, or time order. Individual records or a range of records can be selected from a datafile. Finally, records can be added together and cross-tabulated.

Writing a database application with T/Master can be both fun and rewarding. Although planning an application is always preferable, it is possible to design a complete database application for T/Master in an afternoon. Once the application has been designed and debugged, it may be automated with keystroke macros. In fact, your application may be so complete that you may forget you're running T/Master!

The Scratchpad And The Spreadsheet

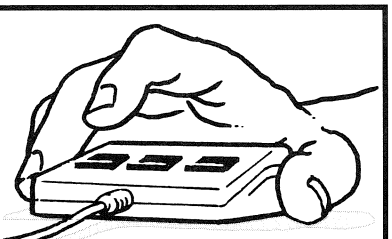
While most word processors feature columnar addition or four-function calculations for table cross-tabulation, T/Master possesses a unique scratchpad and a unique spreadsheet.

The scratchpad is a zone which contains mathematical formulas. It is available from within the editor. Once the formulas have been written and the zone has been defined, the scratchpad may be calculated by simply depressing **f8 Z**. Evaluation proceeds from left to right, top to bottom. It is far handier to use than BASIC, or even Lotus 1-2-3.

The spreadsheet is both powerful and elegant, fully integrated with the database manager and the word processor. It is unique in its approach to solving your problems: the formulas are written along the borders of the sheet in calculation lines and stripes. This visual approach has an advantage over Lotus-style spreadsheets, since all of the formulas are plainly visible. You may compute the whole file, or from the cursor position forward.

A spreadsheet may be created within a word processing document, or written separately and merged into the document later. If you need to use information from a

Top-rated mouse adds convenience (and fun!) for Portable Plus users



Move a mouse around on your desk and the cursor moves around the screen. It's easier than cramping your fingers on the arrow keys—especially if you move the cursor around a lot (with Lotus, say, or with your word processor). For creating freeform graphics, a mouse is a must.*

The best mouse we know of is also one of the least expensive.

EDITOR'S CHOICE

It's the LOGITECH MOUSE (model C7 from Logitech, Inc.), and it runs beautifully on the Portable Plus when coupled with a PORTABLE MOUSE SOFTWARE program developed exclusively for us by Bill Saltzstein. The LOGITECH MOUSE was rated Editor's Choice by *PC Magazine* (January 27, 1987).

3 BUTTONS—EASY TO CUSTOMIZE

The LOGITECH MOUSE offers high resolution, precision tracking, and a convenient 3-button design. (The Microsoft mouse, which sells for $100 more, only has two buttons.)

With our PORTABLE MOUSE SOFTWARE, you can assign a different keystroke to each of the buttons. You can also assign a different *set* of three keystrokes for each of your applications.

Our PORTABLE MOUSE SOFTWARE also lets you control the distance that the cursor will move for a given movement of the mouse.

TRY IT AT OUR RISK

Not sure you'll like using a mouse with your Portable? The only way to find out is to try one. Remember, you can order any product from us, use it for 60 days, and then return it for a full refund if you are not completely satisfied.

Order a Logitech or Microsoft mouse for your Portable Plus, risk-free, today. (Don't forget to order our PORTABLE MOUSE SOFTWARE and cable too; you'll need them to run either mouse with your Portable Plus.)

Portable Plus Mouse Systems (Logitech Mouse, Portable Mouse Software, Cable) . . . . . $204.95. $174.95 for Portable Paper subscribers.

For pricing of individual components and Microsoft Mouse, see "Additional Products" opposite the order form in this issue.

A WORD ABOUT THE MICROSOFT MOUSE

The Microsoft mouse has only 2 buttons, but costs $100 more than the 3-button Logitech mouse. Nevertheless, the Microsoft mouse may be your best bet if you want the IBM PC-compatible graphics software it comes with.

If you already own a serial Microsoft mouse—or would like to buy one—there's no need to buy the Logitech Mouse as well; to use the Microsoft mouse with your Portable Plus, all you need is our Portable Mouse Software and a cable to connect the mouse to your Plus.

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See order form for details.

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Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
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RUNS ON:			
HP Portable		HP150	
Portable Plus	●	IBM PC / HP Vectra	●

*See ad for Sketch, the graphics program for the Portable Plus, in this issue.

database as well, the spreadsheet can be the perfect template for your data. You can easily prepare a report by extracting data from your spreadsheet and cross-tabulating the results. The **.clean design** command instructs the printer to ignore the formulas so they do not appear in the printed report.

Although not as large nor as fast as 1-2-3's spreadsheet (50 columns), T/Master's spreadsheet is adequate for all but the most demanding business needs. However, the macro facility and the database manager more than compensate for this. Like Lotus 1-2-3, it is possible to combine a table on disk with a table in the active workspace and to perform a variety of calculations for a series of tables. Zones in the active area may be protected to prevent inadvertent transfer of data into them. The **BAR** command prepares a bar chart based on the data in the spreadsheet. The bar chart's size may be adjusted to suit your taste, and then inserted into the document.

T/Master's Talk: The Communications Module

Talk, a comprehensive communications module for T/Master, has been modified to run on the Portable Plus. It works with either the internal modem or serial port, is easily configurable, and supports a friendly, general purpose command language for automated communications processing.

Conversing with Talk is very similar to working with other parts of T/Master. The top four lines display the configuration parameters, the communications status, and a user menu that is almost intuitive to use. It is possible to start Talk with customized default settings using the **TALK.UTL** file, another command file, or execute instructions in the active workspace by typing 'rtalk'g after the "What Next?" prompt.

Although designed as a simple terminal emulator with dial-up and file transfer, Talk possesses many sophisticated features often found in stand alone communications programs, such as CrossTalk XVI. Several file transfer protocols are supported: ASCII, Binary, Xmodem, Xmodem-CRC, and Ymodem. Data capture to disk is useful in situations where transaction logging is needed. File transfer can be easily automated by implementing simple command language "script" files.

If you should require complete automation (i.e., for unattended operation), it is possible to load a command file that automatically loads T/Master from a **pam.mnu** file, dials an information service, logs on, transfers files, signs off, and prints the reports! This automatic procedure can, of course, be implemented for any number of unattended sessions.

Communications parameters are specified as SETTINGS from within Talk, via the menu. Using the terminal and transferring data is called an ACTION. The user is in direct control of modem/serial port power, since the desired device is turned ON only when a CONNECT command is issued, and turned OFF when a DISCONNECT occurs. Therefore, it is possible to maintain a connection with the host computer, and resume work elsewhere in the program.

Talk complements T/Master with a comprehensive communications suite. Although equipped with many options, protocols, and a rich command language, Talk appeals to the novice user as well. It makes T/Master one

of neatest programs available for the Portable Plus, and even a better reason for obtaining a copy, since it supports virtually all of your business needs.

Integrated Applications for T/Master

Since T/Master is so versatile, it should be able to satisfy virtually all of your business needs. If your application demands close integration of data, calculations, and reports, then this product is ideal for you. If you need to create a small database application but don't have the time to invest in learning a programming language or a database language, T/Master may be the tool you're looking for.

Operation on the Portable Plus

T/Master is a large program, broken into several core applications and many additional utility modules. The core system comfortably runs on a Portable Plus with 512K of memory. It is possible to keep only the word processor (Edit) and the associated align and printer modules on the Edisc, and leave the other modules on an external disk drive. The spreadsheet and database features can be added as you need them. For field use, you may consider using only the word processor.

To give you some idea of the size of the product (including the printer drivers, batch files, sample database files, and dictionary) T/Master arrived on two 5¼" floppy disks, which were nearly full.

T/Master itself needs 256K of internal memory (set in PAM's **f6 System Config**). The Word Processing Kernel requires 123K. The speller takes up 153K. The combined data base and spreadsheet occupy 104K. The communications module, Talk, require 33K. Finally, miscellaneous other utilities such as importing data, bar charts, secure, sorting, and merging takes 63K. The whole program easily fits in an 896K machine with more than 250K left for data.

T/Master would be ideally suited for the Portable Plus if it were available in a plug-in ROM format. Each time I have called Hal Goldstein about the product, I have approached him with the possibility of working with T/Maker Company and making this dream a reality for Portable Plus owners. Peter Roizen, the author of T/Master, believes it could be accomplished with minor program modification. The program would occupy four ROM (4) sockets in the software drawer, but could potentially replace every application you're currently using.

T/Master Wish List

T/Master is so complete that you'll probably use it for all of your needs. It is very difficult to criticize the product, because if there's a will to accomplish a task, there's probably a way to do it with T/Master. However, there are a few desirable features that T/Master doesn't currently possess.

A print queue would be of great value to the user who has heavy word processing requirements. A line draw mode (similar to WordPerfect or MultiMate Advantage) would give users the ability to enhance the appearance of tables and titles within a document. Independent windows or file buffers would be very useful for multi-file editing and viewing. Although the bar charts are quite sufficient and very flexible, a variety of charts (line, X-Y, pie, exploded pie) would give some variety to the presentation of tabulated data.

Recommendations

T/Master is an innovative, exciting product. It is easy to become a fanatic about it. The integrated features are delightful to use. Fully integrated communications would make T/Master the most versatile product available for the Portable Plus. In order to take advantage of the system you should have at least 512K of memory.

T/Master could easily replace all of your existing software. If it were available in ROM format, it would be an application without equal. If you're interested in such a program in ROM format, consider calling or writing Hal Goldstein of Personalized Software and tell him. It is an opportunity that Portable Plus owners have all been waiting for!

[Both T/Maker and T/Master, products of T/Maker Company, 1973 Landings Dr, Mountain View, CA 94043, (415) 962-0195, are available from Personalized Software PO Box 869, Fairfield, IA 52556, (515) 472-6330, for $295, or $249 for Portable Paper subscribers. T/Maker is recommended for HP110 users, T/Master for Portable Plus users.]

T/Maker A 110

By David Hughes

Introduction

If you thought there would never be hope for an integrated program that would run on the HP110, T/Maker may be the kind of solution you're looking for. Designed to operate in a minimum of 128K of user memory, T/Maker logically integrates word processing, relational database, spreadsheet, bar charts, and spelling verification into a single work environment. T/Maker is the forerunner of T/Maker Company's latest product, T/Master. T/Maker runs well on the HP110. The Portable Plus can run both T/Maker and T/Master.

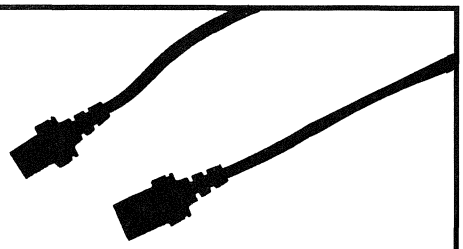
T/Maker Highlights

If T/Master is the most versatile and most interesting product I've ever seen, then T/Maker would qualify as the only product to do so much with so little. T/Maker's word processing environment is relatively fast and very friendly. Like T/Master, it is possible to have text, data, bar charts, and a spreadsheet within the same file. Headers, footers, and footnotes are supported. Paragraph alignment is specified by aligning "wedges", allowing for ragged or left/right justified text. Printer enhancements, automatic page numbering, horizontal scrolling, protected "blocks", and keystroke macros are fully supported.

T/Maker's database is quite versatile, allowing flexible forms and record definition. A form is used to create a

Attention users of the HP41, 71, 75, and series 80 computers:

Transfer data both ways between your HP hand-held and your HP Portable (or HP150, IBM PC, printer, modem, and more!)



Hewlett-Packard's HP-IL interface lets you transfer data from certain HP-IL devices to certain other HP-IL devices—for example, from hand-held computers to printers and disk drives, or from your HP Portable to an IBM PC.

Unfortunately, the HP-IL interface does not allow all possible combinations; notably missing is the ability to transfer data from HP hand-held computers to MS-DOS computers like the Portables, the HP150, and the IBM PC.

Now all that is changed, thanks to a software program called LINK.

LINK lets you transfer data from *any* HP-IL device to any other HP-IL device. This means, for example:

- You can transfer data both ways between an HP41, 71, 75, or series 80 computer and your Portable, HP150, or IBM PC.* This gives your hand-held direct access to your MS-DOS machine's computational power and unlimited storage capability.
- You can control your HP hand-held from your HP Portable or desktop computer keyboard.
- You can use your Portable or desktop computer's video screen to display entries made on your hand-held.
- Your hand-held can access and control any peripheral device that connects to your Portable, 150, or PC—including modems, printers, plotters, mainframes, graphics tablets, and more.

In short, without adding a single piece of hardware,* LINK extends the power of your hand-held to include a whole world of peripherals and capabilities. And it does so for less than the cost of a single peripheral.

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*provided your 150 or PC is equipped with an HP-IL interface card available from Hewlett-Packard.

LINK was written by Paul Grimmer, author of SideWinder, the sideways printing program, and Sketch, the freeform graphics program, both for the HP Portables.

simple data entry screen that has meaning for the user. A record is a data template, used to define the data file. It is easy to create a relational database by writing "rules" which relate the individual fields.

T/Maker's spreadsheet allows you to visualize what's going on because the formulas are placed along the border of the spreadsheet. Like T/Master, the formulas are "cleaned" from the document when printed. T/Maker's spreadsheet is sufficiently large for most users, with fifty computable columns.

Bar chart graphics are easily produced and displayed either as characters or graphic symbols, and can be placed anywhere within the work area. Although flexibility is limited to horizontal bars, it adds a nice touch to a report.

Operation On The HP110

T/Maker is a relatively large program, divided into many smaller modules. Although it doesn't completely fit on the HP110, it is possible to successfully run the product. Some modification is necessary to get T/Maker to accommodate the HP110's 16-line display. Note that the help system is designed for a 25 line display and is not easily modifiable by the users. However, the user can see most of the help information.

The core system (consisting of the word processing kernel) requires a Memory/Edisc configuration of 128K/144K, and approximately 69K of storage. Printing and alignment modules add an additional 18.5K of overhead. Update, the database editor, and Compute (use for computing spreadsheets) add 26.7K, bring the total for the basic system to approximately 113.5K.

There are two alternatives for running the program:
1. Divide the Memory/Edisc in half (128K/144K) and copy the basic system to the Edisc. Use the external disk drive for data storage, and additional T/Maker commands.
2. Partition the Memory/Edisc as above, but only load the word processing kernel. Store data on the Edisc, and use the external disk drive for most of T/Maker's commands.

I'm not exactly sure which configuration would be the most comfortable; however, I'm inclined to adopt the first method and reduce the disc access. If neither method is suitable for Portable use, consider operating T/Maker in the office and using The Editor or MemoMaker in the field. This is an acceptable method for creating files, saving the integration for T/Maker. This is possible since T/Maker files consist of just plain ASCII text. (Note: The T/Maker package consists of approximately 91 files, nearly filling a single 3½" double-sided flexible disk.)

T/Maker runs well on the Portable Plus with at least 512K of memory. Most of the integrated system can be loaded onto the Edisc. However, T/Master, the sequel of T/Maker, offers greater speed, T/Master power, and a significantly better database.

Conclusions And Recommendations

T/Maker is a wonderful product, and makes the most of the HP110's tiny resources. It runs on a variety of computers, including the Portable Plus, IBM PC, and the HP150. Although it is not a "portable" program (i.e., suited for field use unless you carry an external disk drive), it turns the HP110 into an integrated work environment. An external disk drive is required, and an Empowerer is highly recommended.

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Sketch 110, Plus
Flow Charting II Plus
Mouse Plus
A

By Sergio Biguzzi, MD

Until recently, no serious packages except Lotus 1-2-3 have taken advantage of the remarkable graphic capabilities of the HP110 (480 x 128 dots) and Plus (480 x 200 dots).

Finally, several programs have became available for HP110/Plus users. The first of these is the free form drawing program, SKETCH, from Southern Software for HP110 and Portable Plus users. (This SKETCH has very little to do with the sketch program offered as a "freebie" with SideWinder.) Secondly, for the Portable Plus only, there is FLOW CHARTING II+ from Patton & Patton, which allows the easy creation of flow and organizational charts. Finally, there is PPRLE available in the public domain from the CompuServe HP and PICS Forums that allows the display of pictorial images. We will review SKETCH and FLOW CHARTING in this issue and leave the discussion of PPRLE to a future issue.

I will also comment on a Mouse driver that Bill Saltzstein has recently written for the serial port of the Plus (not for the 110) which definitely changes the feeling for creating graphics on the Plus.

SKETCH

I really love this program, which I have seen grow from its first appearance as a "freebie" (together with SideWinder) to the current, just released Version 2.11. I have been in touch with the author, Paul Grimmer, who has always patiently taken into account my repeated requests of additional features.

The package is not difficult to use. It may take a couple of days to get accustomed to all the different features, but from the start, one can rely on the **f1** (help) and **Print/Enter** (status) keys.

SKETCH runs equally well on the 110 and the Plus; it can be easily run from the external drive since drive usage is limited to the time to load the program (17 seconds) and to load and store any SKETCH files if the C drive is chosen for this purpose. The Help screen pops up when you load the program. Alternatively, you can easily install and run this 43K program in your A drive from PAM.

SKETCH operates in two modes: drawing mode and alpha (text) mode. The **Select** key used as a toggle. It is possible to change freely from one mode to the other so that graphics and text can be easily mixed on the same display.

GRAPHICS MODE

The graphics mode allows "total freedom", meaning that one has access to (i.e., can turn on or off) every single dot on the Portable's screen. This creates the possibility of drawing anything from simple lines to complex portraits. The only limitation, in terms of free form drawing, is that precise manual control of the cursor at the level of single dots is difficult. However, using a mouse helps solves this problem.

While drawing, one may think of the cursor as a pen/eraser which can be Up (just moving around without leaving any mark) or Down (leaving a trail, dot by dot, or erasing pre-existing trails if the **Erase** function is on).

Also, one can count on a reference point (called **M**emory point), which can be fixed in any part of your screen. This point is essential to the automatic drawing of geometrical forms. For instance, after setting the memory point somewhere on the screen, when the cursor is moved by 10 dots, a circle will automatically be drawn by the function **C**. By moving the cursor farther from the **M** point, a concentric larger circle can be drawn, and so on. Similar principles apply for boxes and lines. (You can exchange the positions of the cursor and memory point with **X**.)

Another very nice way of drawing lines is the "rubber band" option **R**. The rubber band is a temporary line that connects the memory point and the cursor as the cursor moves. At any time you can stop the cursor and permanently leave the line.

In addition, there are several options that allow you to darken or erase an entire enclosed area, regardless of the shape.

All that has been said so far applies not only to the screen, different on the Plus and HP110, but also to the "global working area" of 640 x 256 dots, equal for both machines. The global working area (that is, your total drawing area) is twice the screen size of the HP110 and 27% larger than the Plus.

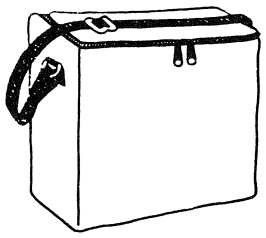
ALPHA MODE

The alpha (text) mode is very easy to use and allows one to utilize the different fonts "hidden" in the Plus (which are also available to the 110 as external files). Notably, it is possible to mix bold, thin, mathematic, and IBM character sets on the same Plus screen. All 255 characters of each of these fonts can be entered and mixed with the graphics.

Characters can be displayed (and printed) in different directions: standard left to right; up to down; down to up; and upside down. You can automatically create different spacings between characters resulting in either 60 or 80 column screen lines. Finally, the characters can be normal, that is, dark on a light background, or inverted. You can overwrite or overlay screens with other screens.

In alpha mode, you determine exactly where the character will be printed horizontally and vertically. The space, backspace, and Return keys moves the cursor as in a regular word processor. The arrow keys allow you to finely position the cursor one graphic dot at the time.

Single characters or entire sentences can be saved as partial files that can be enlarged automatically with different height/width ratios for future use. When you enlarge characters 3 to 4 times their normal size, the result is pleasant and gives good flexibility. However, if you go much further, the quality of the printout will not be as good



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The **Printer/Disk Drive Case** holds your ThinkJet or 9114 (you may want to buy two). The **Portable Case** holds your HP110 or Portable Plus (has more room and better padding than HP's case, plus it can carry the smaller Printer/Disk Drive Case piggyback).

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since it will result in characters that are too coarse (made up of a too few, very large dots).

FILES AND PRINTER MANAGEMENT

The options to store graphics are numerous, handy, and well designed. You have the option of saving the entire working area, which creates a file of size 20480 bytes no matter how many dots are in it. To save disk space, you can save just a portion of the graphics area (called the "ideal box", which is the area defined by the memory point and cursor position).

When you save an ideal box, you can save in normal or sideways mode with height and width multiplier factors. To save a graphic or a portion of it for pure printing purposes, appropriate options are given. These printable files are "compatible" with word processors that can send files to the printer.

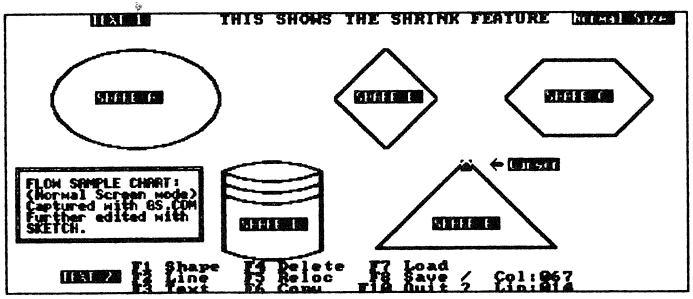
The loading of a normal SKETCH file is very simple and can be done overwriting (the area of the old drawing will be lost) or overlaying (the new file will be overlaid as it was drawn on a transparent sheet, therefore "added" to the old one). If the file loaded is partial, its left upper corner will correspond to the cursor position.

Other utilities accompany the SKETCH package, including: SKDEMO, TESTPORT, LOADFONT, and GS (Graphic Screen capture). I will briefly discuss SKDEMO and GS.

SKDEMO is a preliminary and potentially very interesting utility that enables SKETCH to accept non-graphic input directly from specially created files and translate it into graphics. On the SKETCH master disk is a demonstration of SKETCH using SKDEMO and a specially created input file. A series of screens automatically get displayed to the user showing the many features of SKETCH. This demonstrates one possible of application of SKDEMO—creating a sort of slide show.

The principle of SKDEMO is to provide the user with a series of rules to create input files for SKDEMO, a sort of SKETCH interface programming language. I think the real interest is its potential for writing programs that can "use" SKETCH as a tool for drawing plots of mathematical or statistical functions generated as series of data by other programs. I hope that this capability gets further implemented for the benefit of the advanced user and of the program itself. (I am already dreaming of plots on the Portables like those of Lotus 1-2-3, but more refined.)

Another extremely useful utility is GS.COM, which can capture any graphics screen and translate it to SKETCH format. It is a resident program (13033 bytes for the 110 version and 12800 for the Plus) which will temporary redefine the **Shift Print** key so that, instead of sending the graphic screen to the printer, it will send it to a SKETCH file. This program is excellent and extremely useful. I have captured graphic screens from applications—Lotus, TigerFox, PPRLE, FLOW CHARTING II+—and transferred them to SK files.



FLOW CHARTING II+

This is a 93410 bytes package that requires at least 216K of program space and works on the Plus without major modifications.

FLOW CHARTING is unusual because it is graphically limited to preselected shapes exclusively dedicated to the development of flow charts. In this respect the program is nice and completely fulfills its promises; however, it could be very easily expanded to a wider audience if more shapes were included. For instance, formulas of organic chemistry could be very easily assembled by the user if only different polygons were offered among the selectable geometric shapes. On the other hand, the creation of such shapes would be virtually impossible for the user since diagonal movements of the cursor are not allowed.

The program is easy to run, shows very few bugs, and leaves only some minor problems for Plus users. It supports the ThinkJet but not the QuietJet. At start, a customization menu is offered to adjust different parameters (selection of printer model, printer port, paper size, page width, mouse response and beep). The parameters will be remembered by FLOW CHARTING for future use.

A nice feature is that the program senses the Plus' presence: the ThinkJet is among the selectable options.

GRAPHIC MODE

From the main menu the user can enter graphic (EDIT) mode to find himself in a virgin screen, or he can load a chart file. The block cursor is large and visible, and status lines with different useful information are provided.

Several graphic commands are assigned to standard keys. For instance, **S** will shrink the global graphic area to fit into the Plus screen, and a precise and visible grid

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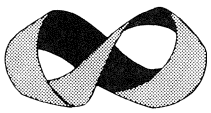

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system of "cross hairs" (thin bisecting lines) identifies the cursor position. This is a very handy feature since Shrink mode still allows all the editing features.

The cursor can be moved with the arrow keys, and the **F** (Fast) toggle will allow very fast cursor movements. These and the other movement commands work very well. While in graphic mode, a collection of different shapes of variable proportions (e.g., circle, box, and diamond) are available for fast, easy access, from a menu using a pointing cursor (eliminating the need for loading files from an external drive).

After the selected shape has been imported, the user can choose between predefined vertical to horizontal ratios. The accepted shape becomes a permanent part of the chart. The shape can easily be copied, moved, or deleted. As a complement to the graphics capabilities, lines can be easily drawn through the Line option. FLOW CHARTING provides different line styles and functions selectable with **f9** (Menu key for the Plus).

Lines are drawn by moving the cursor horizontally or vertically; no diagonal movement is allowed, and no provision is given for lines between two selected points.

ALPHA MODE

The alpha mode is a solid part of this program. It features different fonts; pleasing visual presentation on the screen and in the printout; large characters for titles, normal or bold, extra large, tall and slim characters; and super and subscript sets. Also, a Greek character set is available.

Several very useful functions are provided, including auto centering, inversion of a part of a chart, and automatic recognition by the program of the font beneath the cursor.

I have found only a minor bug. In the MICRO font, the numbers as well as the space keys generate a **6** instead of the proper character. This feature works correctly on the IBM PC.

Mouse

I am currently using a Microsoft mouse with a prototype of Bill Saltzstein's Mouse Driver installed in my Plus. It is a very easy combination that works wonders, with some limitations due to the prototype nature of the driver. It is enough to say that despite the fact that I do not have manuals for the driver or for the mouse, everything works smoothly. Actually, included on the disk is an Install utility that automatically does the few operations required.

To make the mouse work, the user has to add the line **device = a:\mouse.sys** to the file **config.sys**. (If you do not have such a file, you have to create it.) Then, with the **mouse.sys** on drive A, press **Ctrl Shift Break** to install the driver. You will get the message **Mouse driver installed**. If the mouse is not there or if the connection is not OK, a second message will notify you of the absence of the mouse.

There is not much on which to comment on the use of a mouse: I will buy one! I am just waiting for the LogiTech three-button mouse. I plan to use it in two applications: Lotus and SKETCH. I would not recommend buying it just for FLOW CHARTING II+ since you cannot travel diagonally in this program. But using the mouse within spreadsheets, you can literally jump from one cell

to the other, even if far apart, in no time. By assigning the most used keystrokes to the two (on the Microsoft) buttons of the mouse, I was able to do a good part of the work with one hand, far from the keyboard.

The mouse is even more important for SKETCH, where it allows complete control of each dot of the graphic screen. The first example that comes to my mind is drawing a signature. Without a mouse it is practically impossible; with it, although the movement is not completely natural, it is much simpler and a matter of relatively few attempts.

I also enjoyed the feeling of real painting with it. I could move the "pen" (cursor) up and down left and right in an almost natural manner exactly as I would have done with a coarse chalk, if not with a precision pencil. In particular, the erasing with back and forth short movements was very natural. With three buttons—Up, Down, Erase on/off—I could draw elaborate free form sketches.

These possibilities have been immediately picked up by Paul Grimmer with the current new version of SKETCH (2.2). SKETCH not only takes full advantage from the mouse, but for 900 extra bytes includes a routine for defining the mouse parameters and controlling the Plus power to the serial port. The equivalent routine RAT.EXE which accompanies the mouse driver occupies 12442 bytes.

In conclusion, the mouse driver (which only works with the Portable Plus serial port, not the HP110) is a very promising tool. It works fine in all applications. It is especially recommended for graphic packages, with full graphic access and for extensive use of spreadsheets.

Summary

We are finally seeing graphic programs for the Plus and the HP110.

Plus users can now access the Run Encoded Length system and share images available to the large community of PC users. *[Ed—Information will be published in a future* The Portable Paper *about this public domain program available on CompuServe.]*

FLOW CHARTING is a good program exclusively designed for flowsheet charting. Although it costs more than double SKETCH, this package is surely recommended for the professional who frequently prepares seminars or presentations. In fact, the printouts of these flowsheets can be easily photocopied onto transparent sheets to give excellent charts projectable with a diascope.

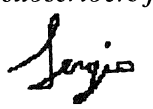
And as I mentioned earlier, FLOW CHARTING could be very easily expanded to a wider audience if more shapes were included. However, the creation of some of these shapes would be virtually impossible for the user because of the lack of diagonal cursor movement.

SKETCH is a growing program that needs, in my opinion, some final additions, even at cost of increasing its size, to allow one to move and to copy portions of screen to other locations. A status line(s), the correction of minor bugs, and possibly a Shrink feature would be desirable.

Although I would like to see the above additions made to SKETCH, I feel it is a superb package. The excellent GS.COM utility provides a means to import graphics screens from other applications. The versatility of SKETCH and its potential ability to accept inputs from specially defined files using SKDEMO should allow Southern Software to produce separate additions to the package. Additions could include new fonts, creation of libraries of icons, and interfacing with programs able to generate plots.

Finally, Paul Grimmer's new HPrint program easily allows SKETCH sketches to be integrated with the text created in your word processor for output to your ThinkJet or QuietJet printer.

[SKETCH, FLOW CHARTING II+, and HPrint are available from Personalized Software, P.O. Box 869, Fairfield, IA 52556, (515) 472-6330 and can be ordered from the order form at the back of the issue. SKETCH and HPrint retail for $80 each, $75.95 with the Portable Paper *discount. Subscribers who purchase SKETCH or HPrint can purchase the other for $69.95. FLOW CHARTING II+ retails for $232 ($209 for subscribers). The LogiTech Mouse system for the Portable Plus (mouse, software, and cable) retails for $204.95 and can be purchased by subscribers for $174.95.]*



This signature was created using Sketch and a Mouse.

Through the Looking Glass

By Ed Keefe

GOALS FOR THIS TRIP

In this article, we'll go through the Looking Glass and wind up in space. We'll venture where few owners of the HP Portables boldly go.

WORKING WITH MS-DOS

Most owners of the HP110 and Portable Plus start using their computers via the Personal Applications Manager (PAM).

However, users who have logged some time on their Portables or who have worked with other computers soon leave PAM behind and move into the realm of MS-DOS.

Working with MS-DOS is like working with building blocks compared to working with a finished product like PAM. However, working with MS-DOS can produce an "Ah-ha!" experience. There is much to be discovered in MS-DOS. There is also the feeling that you have bested the beast, mastered the machine. This is something that you don't get from "pushing the buttons" in PAM.

I wish there was some way to give you an "Ah-ha!" experience of discovery. Barring that, let me share with you some insights that will add to your mastery of your computer.

The first insight has to do with a small part of MS-DOS that gets short shrift in the MS-DOS Users Guide. I refer to the **set** command and something called "environment space."

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WHAT IS ENVIRONMENT SPACE?

Briefly, it is a small part of the computer's memory, 160 bytes, which MS-DOS sets aside each time the computer is turned on. MS-DOS fills some of this space with variables that it uses while the computer is running.

You can find out what these variables are, along with their default values, by typing the word **set** and pressing the **Return** key. Now, if you issue this **set** command while in PAM, you will make an important discovery. The computer will beep at you and give you the message: "**path**, **prompt**, and environment variables must be set using **pam.env** file." We'll see what this means later.

Assuming that you just tried issuing the **set** command in PAM, press any key to cancel the error message. Now move the pointer to the **DOS** prompt and press the Return key to move into the MS-DOS mode of operation. Now type the word **set** (lower case letters will work as well) and press the **Return** key. This time HP110 users should see the following three lines:

```
comspec=b:\bin\command.com
path=b:\bin;b:\
prompt=$d$h$h$h$h$h$h$h$h$t$h$h$h$h$h$h [$p]: $s
```

(HP110 users: If you don't see these three lines, you have already discovered how to set the **path** and **prompt** variables. Plus users: Your **path** will inevitably be longer: a subdirectory listed for each application.)

comspec, **path**, and **prompt** are the names of the three variables most commonly used in environment space. Notice that the names of the variables are linked to their default values by an equal sign. MS-DOS gives these variables the default values shown on the right side of the equal sign. However, in this case, the default values come from the HP Portable's operating system rather than from MS-DOS alone.

You may change the values of these variables to suit your own preferences. You can do this by issuing the **set path=** **<new path>** and **set prompt=** **<new code>** commands. I recommend that you do not change the value of the **comspec** variable. MS-DOS needs the current value to find its way to the **command.com** file.

THE PAM.ENV FILE

Now, before trying out the **set prompt** and **set path** commands, let's take a look at how the HP Portables handle environment space. This is one of the better features of the HP Portables' operating system. HP lets you work with a text file called **pam.env** (PAM's Environment) instead of forcing you to use the **set** commands.

To create new values for the **path** and **prompt** variables, you may use a text editor such as MemoMaker, The Editor, or even EDLIN. Simply create a file called **pam.env** with your favorite editor. Then type in the name of the environment variable, an equal sign, and your preferred values. When you have typed in the new values, save them as an ASCII file on the Edisc. Finally, reset your computer by pressing the **CTRL Shift Break** keys.

Rather than give you a step-by-step procedure to follow for creating new values for **pam.env** variables, let me show you what my own HP110 **pam.env** file looks like:

```
comspec=b:\bin\command.com
prompt=$e[s$e&a60x0y$e&dB$t$e[6D $d$e&d@$e[u$p$g
path=b:\bin;b\;a:\;a:\sd;c:\;
```

Notice that my **comspec** variable is the same as the default value. The **prompt** variable gives an interesting prompt when I am in MS-DOS. It shows the time, day, and date in the upper right of the screen in inverse video. The prompt on the DOS command line shows the full path of the current directory.

Where did I get the secret code for the prompt variable? There are a couple of places in the HP Users Manual that contain bits and pieces of the secret code for

the **prompt** variable. One of them is in Appendix D of the first part of the HP110 Users Manual. The rest of the secret comes from the MS-DOS section of the manual. Look at the pages that deal with **prompt**. Have fun designing your own **prompt** variables, but, first try this one:

prompt=+------+$_$b cmd? b_ +------+ $eA

This will create a prompt that shows a box containing the abbreviation **cmd?** (Command?) each time you press the **Return** key.

PATHS AND SUBDIRECTORIES

My **path** command is also different from the default value. In my HP110 I have created a subdirectory called **SD** as part of the A drive. In this subdirectory I keep a dozen or more small utility programs. They are out of sight whenever I use the **dir** command.

(The use of subdirectories will become more important for Portable Plus users who have one or two megabytes of Edisc in their machines. Thankfully, we owners of the HP110 have been spared making the major financial decision to add this much memory to our computers.)

When I first started using subdirectories, I would type in the command **cd sd** (Change Directory to SD). Then I would type in the name of the utility program that I wanted to run. Finally I would have to issue the **cd ** command to get back to the root directory.

Once I discovered the **path** variable, I saved myself a lot of typing. My **path** variable tells MS-DOS where to look for a given program. In this case it tells DOS to look first in the **b:\bin** subdirectory. If DOS can't find the program or command there, it looks in the **b:** directory, then in the **a:** and **a:\sd** directories. Finally, it looks in the **c:** directory (an external disk drive). Of course, if the program is not found in any of these locations, the computer will give me the **Bad command or file name** error message. If the external drive is not properly connected, I get the **Not ready error reading drive C. Abort,Retry,Ignore?** message.

Once you have discovered the **pam.env** file you may start experimenting with more elaborate **prompt**s and longer **path**'s. Very soon you will make another discovery. You may have finished designing a very clever **prompt** variable and saved the **pam.env** file. When you reset the computer, you will get the error message **Out of environment space**. (This is an even greater problem on the Portable Plus.) What happened?

33 MISSING BYTES

Whenever you use PAM, the normal environment space of 160 bytes is reduced to 127 bytes. Why this happens is a mystery. I have searched far and wide for the missing 33 bytes and have not found where they go.

These 127 bytes do not leave too much room in which to maneuver. However, it may be more than enough room in which to create a new prompt and set up a new path variable for DOS to use.

Having said that, let me show you how else you might use the **pam.env** file.

OTHER USES OF PAM.ENV

The **pam.env** or Environment Space can contain more variables than the usual **comspec**, **path**, and **prompt** variables.

For example, for those of you who have been using the *The Editor*, you know that one of the variables that may be put in the **pam.env** file is the **edconfig** variable. In my **pam.env** file I have the following line: **edconfig=sd** This line tells *The Editor* where to look for its formatting or configuration files. In this case, the files will be found in the **sd** subdirectory on my disk.

Is there a way that you can use variables in the **pam.env** file? Yes, there is. Let me demonstrate with an example.

To work along with this example, start your text editor running and load the **pam.env** file into it.

You may have to cut out some lines from this file to keep the byte count less than 127. Type in the following lines. Note that the third line is a new environment variable called **alt**. It will become an ALTernate prompt when we're done.

```
comspec=b:\bin\command.com
prompt=$e[s$e&a60x0y$e&dB$t$e[6D $d$e&d@$e[u$p$g
ALT=+------+$_$b cmd?  $b$_ +------+ $eA
```

Save this **pam.env** file and then use your text editor to create a batch program called **chp.bat** (CHange Prompt.bat).

Here is what the **chp.bat** file will look like:

```
echo off
cls
if not x%1==xyes goto end
if x%1==xyes prompt=%alt%
end
```

Save this file, then reset the computer with the **CTRL Shift Break** keys. This will put you back in PAM. From there, point at the DOS Command box and press **return**.

When you are in the MS-DOS mode on your computer, you will see the time, day, and date in the upper right corner of the screen.

On the command line, key in the command **chp** and press the Return key. Nothing should happen. When the **chp.bat** program runs, it will look for the full command **chp yes**. The third line in the **chp.bat** program says "If the first additional word in the command line is NOT YES then skip to the END of the batch program."

When you issue the command **chp yes** and press the Return key, here is what will happen. The fourth line of the **chp.bat** program will sense the **yes** and will extract the value of **%alt%** from the environment space. It will then assign this value to the **prompt** variable. Now, when the **chp.bat** program ends, you will see a new DOS prompt.

This is surely a trivial example of what you can do. However, it illustrates a couple of features of the **pam.env** file and the DOS Environment Space.

Notice that when you want to refer to an environment variable, you must put a percent sign (%) on both sides of the variable name.

Also note that you can't access environment variables from the DOS command line. You can use this technique only from within a batch program.

To see how you have modified the environment variables, key in the command **set** and press the Return key. You will find that **prompt** and **alt** now have the same values assigned to them.

Now, issue the command **type pam.env** and observe that **pam.env** has not changed! This tells us that the DOS Environment Space and **pam.env** are not the same thing. **pam.env** is merely a text file used by **pam.com** to set the environment space.

To switch back to the original prompt, you need to reset the computer. **pam.com** will read the **pam.env** file and will re-initialize the environment space.

WHAT HAVE YOU LEARNED?

For all the effort that you have put into reading this article and working through the examples, you have gained a greater mastery over your computer. You have found how to **set** and access the DOS Environment variables to change the DOS **prompt** and the DOS **path**. Beyond that you have discovered that you can even set up your own variables in the limited space of the Environment Block and use these variables in your batch files.

Until next time, Happy Porting.

Ed Keefe is an author, programmer, and Computer Science instructor. He is the president of The FastAid Co., 314 SW Logan, Ankeny, IA 50021. Ed's CompuServe I.D. is 73277,1064.

[Hal—Sergio Biguzzi of New York City sent us a letter concerning the **pam.env** *file. In the letter, Sergio states: "There is a description of the* **pam.env** *file in section 10 of the Portable Plus Technical Reference Manual. When PAM is started, it builds an MS-DOS environment (setting COMSPEC, PATH, BUFFERS, FILES, and PROMPT.)*

The default environment includes: BREAK: **off**, *BUFFERS:* **2**, *FILES:* **0**, *SHELL:* **b:\bin\pam.com**, *COMSPEC:* **b:\bin\command.com** *PATH:* **a:\; b:\<ROM-names>; b:\bin;b:\bin\etc**. *(The PATH varies according to the number of application ROMs present.), PROMPT:* **thhhhh$h [$p]: $s***

(letters continued from page 4)

anyone else had such an experience with the HP9114A? What resources are there for third party "computer crisis counseling"? (My experience with HP during this crisis was not only disappointing but downright frustrating.)

One of the primary considerations that led me to purchase the Portable was quality of engineering and construction. I am a student on a budget in keeping with that vocation so I need reliable equipment with reasonable repair costs. With the Portables and associated peripherals getting older, service is bound to become more and more an issue. As a devoted and appreciative reader, I would request that more attention be paid to issues such as repair (are there self-serviceable problems in the Portables, HP9114s, and ThinkJets?) and service (is HP the only one who can fix its machines? are there service contracts worth the money? etc.).

Thank you for a fine publication. If not for your magazine, I might still be searching for a way to restart my machine.

Ronald K. Colwell, Princeton, NJ

[Hal—Anyone have any comments or ideas on how to minimize repair costs, especially on older machines?]

by The Wizard, Cliff Looyenga

Dialing Up a Portable

The other day, when I got to work I realized I had forgotten to bring a file that was on my Portable at home. I thought about going back to get it, but decided it wasn't important enough. Some time later, however, I thought to myself, "There ought to have been a way that my wife could have just connected my Portable to the phone so that I could have transferred the file."

GETTING THE HP110 TO ANSWER

It turns out there is a way, using the **autoansr.bat** file. This is a file that PAM looks for when the phone rings and, if the file exists, executes it. I created an **autoansr.bat** file that has the following lines in it:

```
terminal /a
ctty aux
command
terminal /h
```

The first line loads the terminal program and tells it to answer the phone. The second line causes both the input and output from the CON (console) device to be directed to the device AUX, which in this case would be the modem. The third line runs the MS-DOS command interpreter, and finally the last line hangs up the phone. (Note that this is for dialing up an HP110, not a Portable Plus.)

What happens when you dial up your Portable now that you have this batch file is that you receive an A prompt. This allows you to do all MS-DOS commands. You can even run programs as long as they read and write only from and to the CON device, e.g., BASIC or EDLIN.

Now we can consider my original scenario, but with this **autoansr.bat** file on my Portable. I would call my wife and have her hang up the phone and connect my Portable to it. I would then call up my Portable and use the **type** command to have the file shown to me. Then I would capture the file with the terminal emulator that I was running. It is true that I wouldn't be able to transfer a binary file using this method.

CALLING UP A PORTABLE PLUS

To be able to dial up a Portable Plus is a bit trickier. I'll tell you the way I got it to work, but it may not be the best way of doing it.

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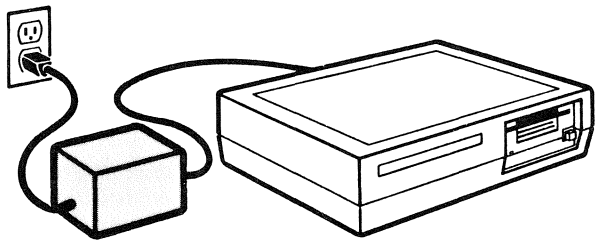
Portable Plus owner wants to upgrade to 1 Meg. Perfect condition. $495. Call Neil Henderson (916) 624-4170.

We Convert Disks
We will convert your 5 1/4" disks to 3 1/2" or vice versa. Send us formatted disk and source disk. $9.50 per source disk. Add $4 for second day delivery. Personalized Software, P.O. Box 869, Fairfield, Iowa 52556, (515) 472-6330

For Sale
HP110 Excellent condition with HP service contract 2/6/88 and software $800. 384K Drawer for 110 Plus (new) $595. Call Henry Warren, (305) 832-6904.

THE HP9114 EMPOWERER



If you've been frustrated trying to use your HP9114 external disk drive only to have the battery quit before you've finished your work, then you know the problem. Now you need the solution.

THE PROBLEM:

The charge on your HP9114 battery doesn't last long enough for you to do all you'd like to. For that matter, in some cases it doesn't last long enough to do *half* of what you'd like to.

According to Hewlett-Packard, you get up to 40 minutes of continuous usage before the battery dies. We've never gotten more than 20. Just formatting disks, transferring files or running disk intensive software and getting it to work can be a major triumph.

Plugging in the HP9114 doesn't help, either. That only recharges the battery—it doesn't let you keep working.

WE HAVE THE SOLUTION:

The official HP suggestion is to buy another battery pack and keep both plugged in. When one loses power, replace it with the other. This seems clumsy to us. What if you want to do several hours of disk intensive work? **At *Personalized Software* we have a better solution—2, in fact. Either will solve the problem.**

SOLUTION 1: This is a special power supply. It will allow your HP9114 disk drive to run forever. Just remove the battery pack, plug Solution 1 into the open slot and into your wall outlet. It's that easy! And lets you run your HP9114 to your heart's content. It costs $129 if you're a *Portable Paper* subscriber, $145 if you're not. SOLUTION 2: A power supply *and* battery pack. Solution 2 includes Solution 1 and a modified HP battery pack you can substitute for yours. Our special battery pack lets your Portable run directly off your wall outlet. You can plug in the regular HP charger at the same time, so your battery pack always stays completely charged. Solution 2 sells for $199 to Portable Paper subscribers; otherwise it's $225. Both solutions are custom-made. Both solve the HP9114 battery problem. And both will let you finish your work.

60-DAY MONEY BACK GUARANTEE
See order form for details.

TO ORDER
Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
Personalized Software
P.O. Box 869, Fairfield, IA 52556 515/472-6330

Please allow 3-4 weeks for delivery.

How many times have you wished you had a 2nd external disk drive? Personalized Software is selling (for a limited time) complete HP9114A units including power supply at a substantial discount. Call 515/472-6330 for details.

You will need three files: **autoansr.bat**, **answer**, and **hangup**. **autoansr.bat** should have the following lines in it:

```
copy answer aux
copy aux con
pause < aux
ctty aux
command
ctty con
copy hangup aux
```

The first line answers the phone, the next two lines provide a delay to allow a connection to be established. We then re-direct the MS-DOS input and output to the modem and run **command** to prompt the caller. Now as in the case of the HP110, the caller needs to issue the **type** command to type the file needed. The **type**d file should be captured through the software in the calling computer. When the caller types **exit**, the MS-DOS input and output are reset and the phone is hung up.

The other two files have the modem commands necessary to answer and hang up the phone. Here are the contents of answer:

```
ATA
ATQ1
```

Of hangup:

```
ATH
```

The line **ATQ1** causes the modem not to print status messages.

Also, **System Config** must have the datacom interface set to MODEM. And in **Datacom Config**, be sure to have the modem's baud rate set correctly.

The Wizard Responds

Q I have been using PCVIEW for a couple of weeks now, and I am very impressed! I have been following your "Wizard" column in *The Portable Paper*, and I am constantly amazed at your technical knowledge of the Portables and of MS-DOS. PCVIEW was the best news I'd heard in a long time...My personal units are HP150B and HP110, but we use a Vectra and NCR micros at work (Oceanside Fire Department).

I had spent much of my spare time over the last year puttering around with specific include files for each machine (the NCRs are really Convergent Technologies, so not 'compatibles'). Thanks to PCVIEW I am able to write Turbo Pascal programs that will run on all units. Before PCVIEW I was forced to re-compile on each machine.

I am especially pleased that you implemented the softkey menu at the bottom of the screen for the 'compatibles'. I like to be fairly consistent in my use of particular softkeys (e.g. "Help" always being the same softkey), and PCVIEW not only makes that easy, it is FAST (like God intended) and well-thought-out.

Thanks for making my job a lot easier... Great product!

From Wes Erickson, San Luis Rey, CA

A Thanks for the feedback. If anybody would like to order the product, see the answer to the next letter.

Q What software is available for making labels? I need something that has the ability to embed escape sequences, configure the number of labels across, and also adjust the label widths.

A Other than doing it the long way, using MemoMaker or Lotus, I know of no product that does this. *[Ed—Condor Junior for the HP110 on our order form will do it.]* However, I wrote a label program that meets many of your needs to demonstrate my screen builder system called PCVIEW. You're welcome to have this program for free—

send a formatted disk and self-addressed stamped envelope in care of Advanced Solutions. If you do any programming in Turbo Pascal, the source to the program comes with PCVIEW. This would allow you to tailor the program to your own needs. PCVIEW can be ordered by sending $24.95 plus $2 shipping to *Advanced Solutions, P.O. Box 567, Veradale, WA 99037, (509) 928-4147.*

(110% continued from page 6)
HP150, you might need to format single-sided disks. Furthermore, many software manufacturers such as HP and ourselves, Personalized Software, sell software on single-sided disks so that all potential users can run the software. If you want to make an exact duplicate of the master disk using the DOS **diskcopy** command, you will have to copy to a single-sided, formatted disk.

To format a single-sided disk, from DOS type: **format c:/w** and press **Return**.

MORE ROOM ON YOUR 3½" DISK

If you format your 3½" disk using the format program built into the Portable's file manager, the disk will have room for 710K bytes of data. But why not have more? If you format the disk from DOS using the **z** option, you will have 780K of storage. That's about a 10% increase!

The command is **format c:/z/i4**.

After formatting, you now have the capacity to store 780,416 bytes of data instead of the normal 700,416 bytes of data. (A point for technical types: This command formats the disk at 1024 bytes per sector with an interleave of 4. The built-in format program uses an interleave of 8 at 512 bytes per sector.) An IMPORTANT word of caution if you ever plan to have an IBM PC compatible read your disk (via the HP Portable to Desktop Link card): The IBM PC will not be able to read from or write to a disk formatted using the **z** option; use the normal format program. (The IBM PC only can talk to disks formatted at 512 bytes per sector.)

1-2-3 Version 2.01 For Portable Plus

We have been discussing the possible release of Lotus 1-2-3 version 2.01 for the Portable Plus only for over a year. As of July, this new version appears on the HP price list (45539K, opt. 400, $495). It will begin shipping in mid-July.

This software resides on three ROMs. The third ROM contains help messages and may be omitted if your drawer is full.

An upgrade will be available for owners of Portable Plus Lotus 1-2-3 version 1A. After mid-August, send $195 (plus your local sales tax) and the glossy front cover from your Lotus manual to HP's Direct Marketing Division, PO Box 60008, Sunnyvale, CA 94008. Ask for the 45539-64001 upgrade. Outside the US, contact your local HP sales office. HP entities should not buy the upgrade; buy the product instead.

Here is what Corvallis support says about the upgrade.

"Should you upgrade? Since version 2.01 files cannot be directly used on version 1A, the primary reason to upgrade is for compatibility with other machines in your office. Some other considerations:

"1. Advantages: Version 2.01 has a number of improvements in the way it consumes memory and in its macro capability. It provides some new @ functions, but is so similar to version 1A you won't have to re-learn anything.

"2. Disadvantages: The released version of 2.01 on the Portable Plus has some problems with sleep and powersave modes which may cause you to turn off powersave mode and lengthen your sleep timeout, such that your battery will need more frequent charging. Powersave mode can cause some operations to slow down by a factor of two, and the sleep timeout can force the machine to sleep even though a macro is still running."

The Answer Is C100

A number of readers, perhaps inspired by our Leading Edge ads last year, have called up in a kind of embarrassed frustration. They purchased a Leading Edge through their local dealer (rather than through us).

However, they or their dealer could not get the HP-IL card (HP82973A) to work. The HP-IL card when properly installed in any IBM compatible will allow data transfer to take place easily between a Portable or HP9114 disk drive and the compatible.

Here is the trade secret (which took many hours of testing and talking to Leading Edge). Change the address in the card from 1700 to C100 and change the other files as instructed. (This all makes sense and is easy to do when you consult the manual.)

HP110/HP110+ USER GROUPS

Thanks to so many of you who are willing to help organize local users groups. Users groups give an opportunity to share tips, answer questions, discuss other products, trade free software and Lotus templates, and meet other professionals. As you will notice some areas have more than one contact person and some major areas have none. If you are in a "missing" area and would like to organize a group, contact us. If your groups combine also tell us. We will publish this column each issue, keeping it up to date. Write *Local Users Groups, Box 869, Fairfield, IA, 515-472-6330.* **California**, *Southern California* We meet 2nd Thur 7-9 at HP sales office, 5161 Lankershim Blvd, North Hollywood. Request PORTOVEC Notes Newsletter, Dave Mark, 818-794-4969. *San Diego*, Stephen L. Eyre. 619-452-8530. *San Mateo, Santa Clara Counties, San Francisco Bay Area*, BAYCHHU, HP Laptops & Handhelds, meet 2nd Sat of the month, Contact Jim Horn, 707-523-4890 eve., or Michael Felsenstein, 415-564-8279, eve. Herbert L. Hamerslough. D: 415-340-8811, E: 415-323-9618. *Los Altos/Mountain View*, Marge Sutton, D: 415-949-0509. E: 415-948-0627. **Colorado**, *Colorado Springs*, Dan Ritt, 303-528-8080. *Denver*, Call Bob Pressey, 303-777-0326 **Georgia**, *Atlanta*, Call Brian Walsh D:404-394-2500 E: 404-399-6842 **Hawaii**, *Honolulu*, Rodney Y. Fukuya if interested, 808-945-3111. **Indiana**, *Indianapolis*, Bob Glass, 317-638-2326. **Iowa**, *Mid Iowa*, Ed Keefe D: 515-964-6644 E: 515-964-7064. *Southeast Iowa*, Hal Goldstein, 515-472-6330 **Minnesota** *Minneapolis/St. Paul*, John Ferman (612) 822-1372 **Maine**, *Yarmouth*, Every last Tue 6:30, US Route one, Yarmouth, ME 04096, 846-5497 **North Carolina**, *Charlotte and surrounding area*, John Jacob, 704-334-3468. **Texas**, *Houston*, Thomas R. Page, D: 713-759-4259, E: 713-528-7138. **Utah**, *Utah County*, Donna Hoover, D: 378-4421, E: 375-4812. **Washington**, *Eastern Washington, Northern Idaho, Western Montana, and possibly Western Washington* , Bob Sandberg. 509-466-4999. *Eastern Washington*, Stephen S. Warner. D: 509-534-1588, E: 509-535-3322. **Washington D.C.**, *Greater Washington D.C. Area*, 8:00 PM, Third Monday of Each Month, Ballston Tower #1, 800 N. Quincy St., Room 519. Call to confirm and to say, Hi. William F. Cross. D:202-696-4112, E:703-845-9508. **Australia**, 8 Avoca St, S. Yarra, Victoria, Australia. Nigel S. Ball. 03-267-8344. **England**, Trafalgar House, Grenville Place, Mill Hill, London, NW7 3SA England. Tim Cullis. (01) 959 4359. **Netherlands**, Mr. R.M. Franquiner, Menthenbergseweg 13, NL-6816 PR, Arnhem, The Netherlands **Spain**, Club de usarios HP 110, Pont Reyes S.A., A la atencion de D. Enrique Serra, Ronda Universidad, 15, 08007, Espana.

High Quality 3½"

Disks at a Discount *From Personalized Software*

Regular Disks

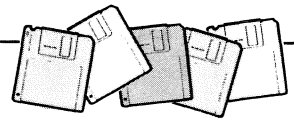
Why pay $69 for 10 disks in a fancy shrink-wrapped box with lots of artwork? We'll sell you quality Sony disks without the Sony labels or Sony boxes, packaged instead in an ergonomically designed library case at no extra charge ($4.95 value).

Portable Paper subscribers pay only ~~$39.95~~ for 10 unlabelled disks. Price to non-subscribers: $64.90.

Now only $29.95

Lifetime Warranty: If a disk ever proves defective, return it to Personalized Software and we'll send you *two* good ones.

Colored Disks



Ever find yourself hunting through disk after disk, reading label after label, just to locate the one you're looking for? Ever wish the right disk would just pop up and identify itself?

Now there's a solution: COLOR-CODED DISKS from Personalized Software. They're high-quality C.ITOH disks, and we're offering them at the following discount prices to Portable Paper subscribers (non-subscriber price is $44.95 per set of 10 disks):

Rainbow Pack (10 disks, one each: red, yellow, green, dark blue, light blue, orange, maroon, red-orange, pink, and beige)

Monochrome Pack (10 disks of same color—choose from red, yellow, green, light blue, and maroon)

Set of 10 disks: **$39.95**
2 or more sets of 10 disks: **$35.95** each

To order: Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to: Personalized Software, P.O. Box 869, Fairfield, IA 52556 (515/472-6330) HP150 users: Be sure to indicate "single-sided disks" on your order form if necessary.

FOLD HERE

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 1047 FAIRFIELD IA

Postage will be paid by addressee:

Personalized Software
PO Box 869
Fairfield, IA 52556

FOLD HERE

Name _____

Title _____

Company _____

Address _____

City/State/Zip _____

Telephone ( ) _____

Method of payment: ☐ Check ☐ MasterCard ☐ VISA

Card # _____ Expires: _____

Cardholder Signature _____

What kind of computer do you use? (check all that apply)
☐ HP110 Portable
☐ Portable Plus
☐ HP150 touchscreen
☐ IBM PC or compatible

Specify size of disk: ☐ 3½" ☐ 5¼"

IMPORTANT:
Check here if you require single-sided 3½" disk: ☐

Personalized Software

Products that make HP Portables smarter

P.O. Box 869, Fairfield, Iowa 52556 (515) 472-6330

ORDER FORM

Prices guaranteed through August 31, 1987.

	Product		Retail Price	Subscriber Price	Qty	Total
SUBSCRIPTIONS	The Portable Paper Check one: ☐ New subscriber ☐ Renewal Begin with: ☐ Jan.,1986 ☐Jan.,1987 ☐ Current issue	3 Year Subscription	139.00[1]	N/A		
		2 Year Subscription	99.00[1]	N/A		
		1 Year Subscription	55.00	N/A		
	Back Issues (indicate numbers)		9.20	N/A		
	Time Manager, Pack, HP Calculator[2]		N/A	7.50[4]		
	1987 Subscriber Disk[3]		N/A	7.50[4]		
DISKS p. 41	10 unlabeled Sony disks and case		64.90	29.95		
	10 colored disks—Rainbow Pack		44.95	39.95/35.95[6]		
	10 colored disks—Monochrome Pack. Specify color:		44.95	39.95/35.95[6]		
PRODUCTS (ALPHABETICAL)	Condor Junior (HP110 Portable only)		99.95	89.95		
	DOS Tools—Portable Utilities Vol. 1 (p. 17)		49.95	39.95		
	The Editor (p. 9)		99.95	79.95		
	The Editor/The Formatter (p. 9)		159.90	99.95		
	Flowcharting II+ (Portable Plus only)		232.00	209.00		
	The Formatter (p. 9)		59.95	49.95		
	HP9114 Empowerer (Power Supply (p. 39)		145.00	129.00		
★	HP9114 Empowerer with used HP9114A Disk Drive[10]		N/A	595.00		
★	HPrint (p. 12)		80.00	75.95[9]		
	Link HP-IL Connector (p. 31)		80.00	75.95		
★	Logitech Mouse System for Portable Plus (mouse, software, cable) (p. 29)		204.95	174.85		
	101 Macros For Lotus 1-2-3 (p. 19)		69.95	62.95		
	Milestone		99.95	89.95		
	Mobile Recharger (p. 24)		29.95	29.95		
	Norton Utilities Version 4.0 (p. 7)		99.95	89.95		
	Norton Utilities Advanced Edition (p. 7)		150.00	129.00		
	Padded Case for Printer/Disk Drive (p. 33)		39.95	37.95		
	Padded Case for HP Portable/Plus (p. 33)		59.95	56.95		
	Power Cube/Recharger (p. 18)		89.95	84.95		
	PrinterTalk		49.95	44.95		
	PrinterTalk/Format110		89.90	59.95		
	Project 8, 9, 10		99.95	89.95		
★	1 Meg RAM/8 Socket ROM Card—1 yr guarantee (Plus only) (p. 1)		1,995.00	1,695.00		
★	2 Meg RAM Card—1 yr guarantee (Plus only) (p. 1)		2,995.00	2,695.00		
	RightWriter (p. 13)		95.00	89.00		
	Shelp (works on Portable Plus only) (p. 25)		55.00	49.95		
	SideWinder + Utilities (p. 23)		79.95	69.95		
	Sketch (p. 28)		80.00	75.95[9]		
★	T/Maker (Recommended for HP110) (p. 30)		295.00	249.95		
★	T/Master (Plus only) (p. 26)		295.00	249.95		
	Turbo Pascal (p. 15)		99.95	89.95		
	Turbo Pascal Starter Kit (Pascal/Tutor/Pascal Programs) (p. 15)		189.85	159.95		
	Typing Whiz (p. 27)		49.95	39.95		
	Webster's Spelling Checker (back cover)		79.95	69.95		
	WordPerfect (Portable Plus only, disk-based) (p. 9)		495.00	299.00		
	The Word Plus (p. 36)		150.00	129.00		
	WorldPort 1200 Portable Modem		235./199.[7]	199./179.[7]		
MISC.						

ROM BACKUP inside front cover	ROM Backup—Product Description	Size[8]	Price	Qty	Total

Important—Please read and initial:
I already own (or am ordering) the disk-based versions of the programs included in my ROM Backup order. If not purchased from Personalized Software, I have enclosed proof of purchase.

Initials: _____

Subtotal	
Iowa residents add 4% tax	
Shipping and handling (see box at right)	
TOTAL	

★ =NEW

European customers:

Beginning August 1st, for faster delivery and lower shipping costs, please order all products directly from our European distributor:

SoftWord
Astage, Rectory Lane
Windlesham
Surrey, GU20 6BW
England

Phone:
In England: Bagshot (0276) 75440
In Europe: +44276 75440

for all details, please contact SoftWord after August 1st.

60-DAY MONEY-BACK GUARANTEE

If, within 60 days, you are dissatisfied with a subscription or product for any reason, you may return it for a full refund. Should you become dissatisfied with a subscription after the 60-day period, we will refund the unused portion of your subscription.

[1] Includes *free* 1987 Subscriber Disk.

[2] Available only to subscribers.

[3] Available only to those whose subscriptions include at least one 1987 issue.

[4] The $7.50 includes shipping. Alternatively, you may mail in a formatted disk and a 39¢ self-addressed stamped envelope to receive the software at no charge.

[5] Subscriber price is $39.95 if you purchased any other Turbo product from Personalized Software.

[6] Subscriber price for colored disks (Rainbow or Monochrome Pack) is $39.95 for one set of 10, $35.95 each if total order includes 2 or more sets of 10. Circle price that applies.

[7] Lower price is without cable for connecting to HP Portables. Circle price that applies.

[8] Indicate 32K, 64K, or 128K (or 2×128K for Webster's Spelling Checker)

[9] If you already own (or have ordered) either Sketch or HPrint, then the price for the other one is just $69.95 (subscribers only.)

[10] Offer good depending on availability of HP9114A disk drives.

FREE SHIPPING FOR U.S. ORDERS OVER $200

FAST DELIVERY

In most cases, you will receive your shipment within 2-3 days of when we get your order.

SHIPPING AND HANDLING:

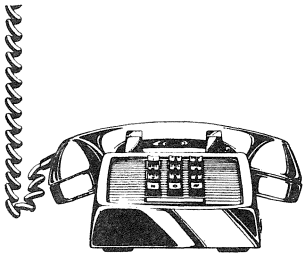
Portable Paper subscriptions:
Subscription prices include U.S. Second Class mailing. Outside the U.S., add the following amounts: Mexico and Canada: $3 surface mail, $6 air. Other countries: $6 surface, $18 air.

All other products:
In North America: Add $4 for one item, $7 for more than one item. FREE SHIPPING FOR U.S. ORDERS OVER $200. Outside North America: Add $3 surface mail, $10 airmail. We bill or charge non-U.S. orders for the actual postage if it exceeds these amounts.

How to Order

TO ORDER BY PHONE:

Call (515)472-6330 between 9:00 am and 4:30 pm Central Time, Monday through Friday, or use CompuServe EMAIL—ID 72257, 714.



TO ORDER BY MAIL:

1. Fill out your name, etc. on the reverse side of the order form.
   - Be sure to indicate your disk requirements.
2. Locate desired items on order form.
   - Subscriptions are at the top.
   - Products are next and are alphabetized.
   - The blank lines near the bottom labelled MISC are for you to write in special instructions or to order miscellaneous products not listed on the form.
   - The last section of the order form is for ordering software on ROM backup. See special instructions below.

3. Fill in desired quantity of each item.
   - Please pay special attention to footnotes.
4. Calculate shipping and handling costs (see box near bottom of order form).
   - Shipping is FREE for U.S. orders over $200.
5. Calculate total.
6. If paying by check or money order:
   - Make payable in U.S. funds to PERSONALIZED SOFTWARE.
   - Place check and order form in an envelope and mail.
   - If you'd rather have us pay the postage:
     - Fold order form so panel addressed to Personalized Software is on the outside.
     - Tape shut and drop in mail.

ORDERING PRODUCTS ON ROM BACKUP

You must own (or order) the disk versions of any products you buy on ROM Backup. See inside front cover for complete information on ROM Backup Service.

Step 1. Select the software programs for which you want ROM Backup from the list below.

Step 2. If you do not own the disk version of each program you have selected, determine which disks you will need to order.

Step 3. Enter your disk order in the alphabetical "Products" section of the order form. Write your ROM backup order in the "ROM Backup" section at the bottom of the order form.

Step 4. Be sure to initial the statement on the order form just beneath the ROM Backup section.

32K and 64K ROMs will be shipped to you by June 1987; 128K ROMs by August. If you pay by credit card, we will not bill you for the ROM Backup part of your order until we ship. If you pay by check, you can send a separate payment for the ROM Backup part of your order; we will hold that part of your payment until we ship.

Example:

Step 1. Let's say you wish to purchase the following ROM Backups:

Turbo Pascal
Webster's Spelling Checker
Super ROM (The Editor, Mini PrinterTalk, Format110, Shelp, and SideWinder)

Step 2. And let's assume that you already own the following programs on disk:

Turbo Pascal
The Editor
PrinterTalk
Format110

To order the ROM Backups you want, you would first have to order the disk-based versions of the programs you do not yet have on disk, namely:

Webster's Spelling Checker
Shelp
SideWinder (or SideWinder + Utilities)

Step 3. See sample at right for how order form should be filled out in this example, assuming you are a subscriber to The Portable Paper.

		44.95			
		89.90	59.95		
		99.95	89.95		
	(p. 13)	95.00	89.00		
	Shelp (works on Portable Plus only) (p. 28)	55.00	49.95	1	$49.95
	SideWinder + Utilities (p. 31)	79.95	69.95	1	$69.95
★	Sketch (p. 3)	80.00	75.95		
	Turbo Pascal (p. 19)	99.95	89.95		
	Turbo Pascal Programs For The Portables (p. 19)	49.95	44.95[5]		
	Turbo Pascal Starter Kit (Pascal/Tutor/Pascal Programs) (p. 19)	179.95	149.00		
	Turbo Tutor (p. 19)	39.95	35.95		
	Typing Whiz (p. 27)	49.95	39.95		
★	Webster's Spelling Checker (works on Portable Plus only) (p. 14)	79.95	69.95	1	$69.95
	WordPerfect (Portable Plus only, disk-based)	495.00	299.00		
	The Word Plus (p. 15)	150.00	129.00		
★	WorldPort 1200 Portable Modem (p. 21)	235/199[7]	199/179[7]		

MISC.

ROM BACKUP (inside front cover)

ROM Backup—Product Description	Size[8]	Price	Qty	Total
TURBO PASCAL	64K	$95	1	$95
WEBSTER'S SPELLING CHECKER	2×128K	$179	1	$179
SUPER ROM	128K	$149	1	$149

Important—Please read and initial:
I already own (or am ordering) the disk-based versions of the programs included in my ROM Backup order. If not purchased from Personalized Software, I have enclosed proof of purchase. Initials: EG

Subtotal $612.85
Iowa residents add 4% tax —
Shipping and handling (see box at right) —
TOTAL $612.85

PRODUCTS AVAILABLE ON ROM BACKUP

	Size of ROM	Price
Shelp	32K	$55.
SideWinder[a]	32K	55.
The Editor	64K	95.
PrinterTalk + Format110	64K	95.
Shelp + SideWinder[a]	64K	95.
Turbo Pascal	64K	$95.
Typing Whiz	64K	95.
Best of DOS Tools	128K	119.
Super ROM (The Editor, Mini PrinterTalk,[b] Format110, Shelp, and SideWinder[a])	128K	149.
Webster's Spelling Checker	256K	179.

[a] This version of SideWinder does not include any of the SideWinder utilities.

[b] Mini PrinterTalk is the abbreviated version included on the PrinterTalk disk. It is functionally equivalent to PrinterTalk for most applications.

ADDITIONAL PRODUCTS

To order any of the following products (or others described in The Portable Paper but not listed on the opposite page), simply write the product name and price on one of the blank lines in the MISC section near the bottom of the order form.

Product	Retail Price	Subscriber Price
CompuServe Starter Kit	$39.95	$35.95
HP9114 Empower with Battery Pack (p. 39)	225.00	199.00
Format110	39.95	35.95
Mouse: Logitech (p.29)	99.00	89.95
Mouse: Microsoft (p. 29)	195.00	174.95
Mouse Software (p. 29)	70.00	60.00
Mouse Cable (p. 29)	35.00	25.00
Pertmaster*	695.00	499.00
Private File	$39.95	$34.95
RightWords dictionary extension for RightWriter (p. 13)	29.95	29.95
SideWinder (without utilities) (p. 23)	69.95	59.95
Tiger Fox	32.95	29.95
Turbo Pascal Programs for Portables	49.95	44.95[5]
Turbo Toolbox (p. 15)	69.95	62.95
Turbo Tutor (p. 15)	39.95	34.95

Our Products in Brief

CompuServe Starter Kit

Gets you started on the Electronic Information Service, CompuServe (which includes the HP Forum). Includes $25 worth of free time, complete Users Guide, permanent user ID number and preliminary password, and CompuServe's monthly magazine, Online Today.

Condor Junior

An easy-to-use database program in a version designed for the HP110 and its 16-line screen. With almost no need to refer to the manual, you can enter data, sort, search, manage files, print address labels, and do limited report writing. Memory efficient—the main program is only 25K, and you add individual 10K programs for each function you wish to use.

See P. 17 **DOS Tools: Portable Utilities Disk, Vol 1**

Well over 50 excellent public domain programs that enhance DOS, all tested on The Portables. Documentation has been rewritten for clarity and ease of use, and includes examples, index, and table of contents.

See P. 9 **The Editor/The Formatter** (separate packages)

The Editor: Many features not in MemoMaker, including search/replace, embedded printer codes, up to 255 columns per line. Also does word wrap, right justify. Easy to use. Uses less than 40K. Versions for HP110, Plus, IBM PC, HP150 all on master disk.

The Formatter: Sophisticated text formatter for large reports, program documentation, etc. Multiline headers, footers, page numbers, table of contents, glossary capabilities, and more. Works with almost all printers. (Note: Documentation is in draft form: no technical support available.)

See P. 39 **HP9114 Empowerer**

A hardware product that prevents the HP9114 disk drive from running out of juice in the middle of your work. Plug Empowerer into your HP9114 and a normal wall outlet, and you can run your HP9114 forever.

See P. 33 **Flowcharting II+**

This program creates professional-looking flowcharts and organizational charts using 26 flowchart symbols in 95 sizes. Wide variety of text fonts for creating labels both inside and outside the shapes. Easy to add and delete lines without disturbing the rest of the flowchart. "Shrink Screen" feature lets you view up to 14″ × 11″ chart on 25-line screen. (Runs on Portable Plus only.)

See P. 12 **HPrint**

A multi-featured program that takes text (ASCII) files you've created with MemoMaker, The Editor, or other word processors and prints them on an HP printer. Comes with italic type font for ThinkJet. Also allows bold, underline, compressed, expanded, subscripts, superscripts, headers, footers, page numbering, double space, and much more—all of which you specify from a simple menu or by means of sensible control codes. (For example, @U toggles underline, @H lets you specify a header, @L toggles 6/8 lines per inch, etc. There's no need to know your HP printer's less obvious control codes because they're already programmed in.) HPrint also does mail merging, and it lets you create your own graphic characters (integral signs, Greek alpha, etc.).

See P. 31 **LINK HP-IL Connector**

A software program that lets you transfer data from any HP-IL device to any other HP-IL device. Now you can access your main computer (HP Portable, HP150, or IBM PC), its unlimited storage capability, and all its peripherals from your HP41, 71, 75, or series 80 hand-held!

See P. 29 **Logitech Mouse for the Portable PLus**

A 3-button mouse for the Portable Plus, bundled with our proprietary Portable Mouse Software and special connecting cable. Using the mouse instead of arrow keys to move the screen cursor makes using your Plus easier and more fun. You can assign a different keystroke to each of the mouse's buttons for each of your applications (Lotus, word processing, etc.). The Logitech mouse was rated Editor's Choice by PC Magazine.

See P. 19 **101 Macros for Lotus 1-2-3**

Useful in themselves and also as learning tools for novices and experts alike, these macros include: recalculating ranges, double spacing spreadsheet prior to printout, hiding notes next to data cells, addressing form letters, and printing labels automatically. Customized for Lotus 1A and Lotus 2.01.

See P. 24 **Mobile Recharger**

Lets you recharge your Portable, ThinkJet, HP9114, HP hand-held computer, etc. from your car's cigarette lighter.

See P. 7 **The Norton Utilities —Customized For The Portables**

Allow you to recover deleted Portable files and organize your electronic and external disks. Peter Norton has authorized Personalized Software to include an extra 3½″ disk (formerly available only on 5¼″ disk) with each package sold. The disk includes The Norton Utilities, additional utilities, and instructions for running The Norton Utilities on the Portables and the HP150. Both version 4.0 and the Advanced Edition are now available.

1987 Portable Paper Subscriber's Disk

Software on disk includes (1) DISKPACK, a pack utility that can work with subdirectories, usable with Edisc, external disks, hard disks. Commercial equivalent sells for $50. (2) Time Manager's Calendar Utility. Prints WEEK-AT-A-GLANCE calendar from Time Manager's appointments list to the ThinkJet. (3) HP Calculator program (4) C Drive Copy Utility. Copies file from one disk to another WITHOUT having to copy file first to your Portable. (5) Other suprise goodies, including game and Lotus templates.

See P. 18 **Power Cube**

Powers and recharges up to four HP devices (HP Portable, ThinkJet, HP9114, HP hand-held, etc.) from a *single* wall outlet.

PrinterTalk and Format110: MemoMaker Enhancers

These two independently developed programs expand the formatting capabilities of MemoMaker. With **PrinterTalk** you can change type styles in the middle of a document, change number of copies and lines per page, do automatic page numbering, and much more. **Format110** lets you format headers, footers and page numbers; chain or merge documents; compensate for "widow" and "orphan" lines and much more. Purchase both products at the same time and receive a 33% discount (subscribers only).

Private File

Protects your confidential letters, documents, spreadsheets, programs, and data communication files. Private File scrambles your file so only you can understand it.

3 Project Management Packages

All 3 work on the HP110, Plus, HP150, and IBM PC. **Project 8-9-10**, a Lotus template, helps you manage small to medium projects. **Milestone** is also for small to medium projects. (On HP110, you need to scroll to see entire Milestone screen.) **Pertmaster** is for medium to large projects (specify which machine). All three are reviewed in Vol. 1, Issue 6 of The Portable Paper.

See P. 1 **2-Megabyte RAM card**

A giant leap in memory size for the Portable Plus. Simply remove your existing RAM drawer and replace it with this card. You'll have enough internal memory to run the largest application and still have lots of E-Disk storage for other programs and data. Works with any Portable Plus with 512K of built-in memory. We will accept your old RAM drawer and any extra memory as a trade-in towards purchase.

Personalized Software

Products that make HP Portables smarter

P.O. Box 869, Fairfield, Iowa 52556 515 472-6330

See P. 1 **RAM/ROM Card**

A megabyte of RAM plus four pairs of ROM slots. (The ROM drawer that comes with the Plus has six pairs of ROM slots.) Add the RAM/ROM card to your Portable Plus and you have a megabyte of extra RAM in addition to space for Lotus (2 ROM slots), Reflection (2 slots), Webster's Spelling Checker (2 slots), MemoMaker/Time Manager (1 slot), and SuperROM (The Editor, SideWinder, Shelp, Mini-Printerflalk, and Format110 all in one ROM slot). Webster's and SuperROM are available from Personalized Software. We will accept your old RAM or ROM drawer and any extra memory as a trade-in towards purchase.

See P. 13 **RightWriter**

Flags errors in grammar, style, usage, and punctuation, inserting comments directly into your document. Also produces overall critique of document (strength of delivery, use of jargon, grade level). Uses more than 2,200 rules and a 45,000 word dictionary, and works with most word processors. Also available: **RightWords** dictionary extension utility for RightWriter: it has 7 auxiliary dictionaries (including business, computers, and engineering), and also lets you add words of your own to RightWriter's built-in dictionary.

Inside front cover **Software on ROM**

Many of our best-selling programs are available on ROM chips via our ROM Backup service. (Portable Plus only.) Saves valuable electronic disk space, minimizes need for disk drive. **Custom ROMs** also available.

See P. 25 **Shelp**

Whether you're in a Lotus spreadsheet, a MemoMaker memo, or almost any program, Shelp gives you immediate access to a notepad and calculator and lets you define up to 26 keyboard macros—that is, assign up to 31 characters to a single keystroke. Written exclusively for the Portable Plus.

See P. 23 **SideWinder**

This program, written specifically for the HP Portables, the HP150, and the ThinkJet printer, allows you to print your spreadsheets (or any other text file) sideways. This means you can print your 60 column by 53 row spreadsheet on the ThinkJet from your Portable as one long printout without cutting and pasting.

See P. 28 **Sketch**

A graphics program for the HP Portables. Lets you draw free-form using cursor keys. Also draw lines, boxes, circles by pressing a single key. Fill shapes with light or dark solid. Five character sets can be displayed normally, sideways, or even upside-down. Entire screen can be printed on ThinkJet at virtually any enlargement. Screens can be saved for future use. Screens can also be imported into Sketch from Lotus and other programs. Only uses 44K of memory.

See P. 33 **Soft Padded Cases**

Roomy, rugged, high-quality, highly padded cases to protect your ThinkJet, HP9114, and HP Portable when traveling.

Tiger Fox

A great video game of changing mazes and double pursuit. First video game designed for the Portables.

Time Manager

The highly acclaimed Portable Plus ROM-based **Time Manager** program in a 3½"disk version for the HP110 Portable. Does not run on Portable Plus. (Available to Portable Paper subscribers only.)

See P. 26 **T/Master and T/Maker**

T/Master is a fully integrated word processor, speller, relational database manager, spreadsheet, file manager, and communications package that also includes keyboard macros and bar chart graphics. It runs on the Portable Plus without modification, and on the HP150 with a PC emulator. **T/Maker** is an earlier version of T/Master; it runs on the HP110 Portable with an external disk drive. T/Maker does not include the communications module. Both programs are more integrated than any other package on the market. (For example, the same editing commands are used in all the modules.) The full-featured word processor even has some features that WordPerfect lacks. The spreadsheet shows the formulas along the borders clearly visible at all times. The database manager is easy to use, and is comparable in its power to dBase III. Our reviewer says, ". . .there is no other application I know of that matches the power, thoroughness, and simple elegance of T/Master."

See P. 15 **Turbo Pascal Starter Kit —Customized For The Portables**

Turbo Pascal, the HP Portable programming language of choice, outstrips others in price, performance, compatibility, memory consumption, and programmer environment. The WordStar-type editor alone is worth the price. Borland has authorized Personalized Software to include an extra disk with their product customizing the Turbo editor to The Portables' editing keys. The **Turbo Pascal Starter Kit** includes **Turbo Pascal, Turbo Pascal Tutor 2.0** (a step-by-step interactive tutorial on Turbo Pascal programming), and **Portable Pascal Programs** (a double-sided disk with more than 50 program examples for the Portables). Also available: **Turbo Toolbox** (includes Pascal sort and search routines that create database/file-management system).

See P. 27 **Typing Whiz**

Better than almost any typing tutor program on the market—designed specifically for The Portables and the HP150. Immediate numeric and graphic feedback of your progress.

See P. 11 **Used HP Portable Equipment**

The Portable Equipment Exchange, a division of Personalized Software, buys and sells used HP Portables, Portable Pluses, HP9114s, HP ROMs and RAMs for the Portable Plus. Because of HP quality, used HP products are a great buy. 30-day return policy on all used equipment we sell.

Back cover **Webster's Spelling Checker**

Rated Editor's Choice by PC Magazine, this spelling checker packs a hefty 110,000-word dictionary into just 207K of disk memory. Webster's shows you incorrect spellings in context and suggests corrections, also lets you preview questionable words before you edit. Excellent user interface—exceptionally easy to learn and use. Customized for the Portable Plus and HP150.

See P. 1 **WordPerfect 4.2**

Disk based Portable Plus version of the best-selling word processing package. Includes spelling checker and thesaurus.

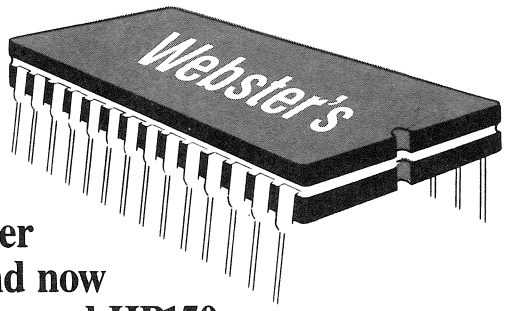
See P. 36 **The Word Plus**

An excellent spelling checker with a choice of two dictionaries—45,000 words and 35,000 words— plus the ability to input additional words and abbreviations of your own. Also does word counts. Customized to the HP Portables.

WorldPort 1200 Portable Modem

A battery-powered, highly compact (4″ × 2″ × 1″), lightweight (6.5 oz), full-featured external modem that transmits data at 1200 baud—four times the speed of the internal modem that comes with the HP110 Portable. Also ideal for Portable Plus owners who do not have an internal modem. The WorldPort 1200 is fully compatible with the industry-standard Hayes AT Command Set, and with both the CCITT and Bell communications standards.

Portable Plus users: At last! A great spelling checker available on ROM!



Webster's (web'stərs) n. The spelling checker rated Editor's Choice by *PC Magazine* (Dec. 24, 1985), and now available from Personalized Software for the Portable Plus and HP150.

—Customized on 3½" disk by special arrangement with Simon & Shuster, Inc.

PC Magazine rated eight leading spelling checkers for ease of use, flexibility, speed, overall program size, thoroughness, and accuracy. WEBSTER'S NEW WORLD SPELLING CHECKER came out on top—for a number of good reasons:

First, there's sheer size. WEBSTER'S contains over *110,000 words* in its dictionary—five times the number in Hayden's Speller, 2½ times as many as in The Word Plus—yet WEBSTER'S dictionary and main program take up only 207K of disk memory.

Second, WEBSTER'S isn't just easy to use—it's positively a *pleasure.* It reads your files at high speed, then displays every questionable word *in context*, highlighted. At the same time, in a "window" off to the side, it gives you a list of possible correct spellings. A simple menu gives you the following options:

- Accept the word as is
- Replace the word with one of the suggested spellings
- Enter the correct spelling manually
- Add the word to an auxiliary dictionary of frequently used words
- Replace all other occurrences of the word
- Look up the spelling of any other word at any time

WEBSTER'S also lets you mark in your text any spelling corrections that change length of a word; this lets you quickly locate portions of text that may need reformatting.

WEBSTER'S will automatically locate double repetitions (like "and and"). It can correct transpositions ("itme" becomes "item"), missing apostrophes ("dont" becomes "don't"), and *typos* of all kinds ("spellling" becomes "spelling," etc.).

If you're not sure of a word, you can even *spell it the way sounds*, and chances are WEBSTER'S will supply the correct spelling. ("Fenomenon" gets corrected to "phenomenon," for example.)

In addition, WEBSTER'S will let you preview a list of all questionable words *before* displaying them in context; this saves you time because it lets you eliminate words from the questionable list (or add them to your auxiliary dictionary) before you begin the editing pass.

John Dvorak, writing in the *San Francisco Examiner*, called WEBSTER'S "the best spell-checker we've seen in a long spell." Henry Kisor of the *Chicago Sun Times* has called WEBSTER'S "the best proofreading software on the market." We agree with them both—and we think you will too. Order your copy at no risk today.

Webster's Spelling Checker on 3½" disk customized for the Portable Plus and HP150 . . . . . $79.95
$69.95 for Portable Paper subscribers.

Webster's is available on ROM backup for an additional $179. See ROM ad in this issue for important details.

RUNS ON:			
HP Portable		HP150	●
Portable Plus	●	IBM PC / HP Vectra	●
Available on EPROM/ROM			

WEBSTER'S SPELLING CHECKER works with any file produced by the Editor, WordStar, and MemoMaker. It also works with ASCII files produced by MS Word and Word Perfect.

Our version of WEBSTER'S includes a customized 3.5" disk and simple instructions for running the program on the Portable Plus and HP150. A special utility allowing WEBSTER'S to run on the HP150 is included on the disk.

60-DAY MONEY BACK GUARANTEE
See order form for details.

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HP Portable users: Sorry, WEBSTER'S won't run on the 110; your best bet is THE WORD PLUS, another top-rated spelling checker available from Personalized Software. (See ad in this issue.)